

In [6]:

```
import requests
from bs4 import BeautifulSoup

url = "https://insights.blackcoffer.com/ai-in-healthcare-to-improve-patient-outcomes/"

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("37.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))

file.write(article)
```

Title: AI in healthcare to Improve Patient Outcomes | Blackcoffer Insights  
Article:

HomeWhat We ThinkAI in healthcare to Improve Patient Outcomes

Artificial IntelligenceData VisualizationMachine LearningBig DataWhat We Think  
AI in healthcare to Improve Patient Outcomes

By Ajay Bidyarthi  
June 26, 2021  
0

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## Introduction

"If anything kills over 10 million people in the next few decades, it will be a highly infectious virus rather than a war. Not missiles but microbes." Bill Gates's remarks at a TED conference in 2014, right after the world had avoided the Ebola outbreak. When the new, unprecedented, invisible virus hit us, it met an overwhelmed and unprepared healthcare system and oblivious population. This public health emergency demonstrated our lack of scientific consideration and underlined the alarming need for robust innovations in our health and medical facilities. For the past few years, artificial intelligence has proven to be of tangible potential in the healthcare sectors, clinical practices, translational medical and biomedical research.

After the first case was detected in China on December 31st 2019, it was an AI program developed by BlueDot that alerted the world about the pandemic. It was quick to realise AI's ability to analyse large chunks of data could help in detecting patterns and identifying and tracking the possible carriers of the virus.

Many tracing apps use AI to keep tabs on the people who have been infected and prevent the risk of cross-infection by using AI algorithms that can track patterns and extract some features to classify or categorise them.

So how does AI do that?

IBM Watson, a sophisticated AI that works on cloud computing and natural language processing, has prominently contributed to the healthcare sector on a global level. Being a conversational AI, since 2013, Watson has helped in recommending treatments to patients suffering from cancer to ensure that they get the best treatment at optimum costs.

Researchers at Google Inc. showed that an AI system can be trained on thousands of images to achieve physician-level sensitivity.

By identifying the molecular patterns associated with disease status and its subtypes, gene expression, and protein abundance levels, machine learning methods can detect fatal diseases like cancer at an early stage. Machine Learning (ML) techniques focus mainly on analyzing structured data, which can further help in clustering patients' traits and infer the probability of disease outcomes. Since patient traits mainly include masses of data relating to age, gender, disease history, disease-specific data like diagnostic imaging and gene expressions, etc, ML can extract features from these data inputs by constructing data analytical algorithms.

ML algorithms are either supervised or unsupervised. Unsupervised learning helps in extracting features and clustering similar features together that further leads to early detection of diseases. Clustering and principal c

omponent analysis enable grouping or clustering of similar traits together that are further used to maximize or minimize the similarity between the patients within or between the clusters. Since patient traits are recorded in multiple dimensions, such as genes, principal component analysis(PCA) creates the apparatus to reduce these dimensions which humans could have not done alone.

Supervised learning considers the outcomes of the subjects together with the traits, and further correlates the inputs with the outputs to predict the probability of getting a particular clinical event, expected value of a disease level or expected survival time, or risk of Down's syndrome.

Biomarker panels that are mostly used to detect ovarian cancer, have outperformed the conventional statistical methods due to machine learning. In addition to this, the use of EHRs and Bayesian networks, which are a part of supervised machine learning algorithms, can predict clinical outcomes and mortality respectively.

Unstructured data such as clinical notes and texts are converted into machine-readable structured data with the help of natural language processing(NLP). NLP works with two components: text processing and classification. Text processing helps in identifying a series of disease-relevant keywords in clinical notes and then through classification are further categorized into normal and abnormal cases. Chest screening through ML and NLP has helped find abnormalities in the lungs and provide treatment to covid patients. Healthcare organizations use NLP-based chatbots to increase interactions with patients, keeping their mental health and wellness in check.

Deep learning is a modern extension of the classical neural network techniques which helps explore more complex non-linear patterns in data, using algorithms like convolution neural network, recurrent neural network, deep belief network, and deep neural network which enables more accurate clinical prediction. When it comes to genome interpretation, deep neural networks surpass the conventional methods of logistics regression and support vector machines.

Sepsis Watch is an AI system trained in deep learning algorithms that holds the capability to analyze over 32 million data points to create a patient's risk score and identify the early stages of sepsis.

Another method known as the Learning-based Optimization of the Under Sampling Pattern( LOUPE) is based on integrating full resolution MRI scans with the convolutional neural network algorithm, which helps in creating more accurate reconstructions.

Robotic surgery is widely considered in most delicate surgeries like gynaecology and prostate surgery. Even after striking the right balance between human decisions and AI precision, robotic surgery reduces surgeon efficiency as they have to be manually operated through a console. Thus, autonomous robotic surgery is on the rise with inventions such as robotic silicon fingers that mimic the sense of touch that surgeons need to identify organs, cut tissues, etc., or robotic catheters that can navigate whether it is touching blood, tissue, or valve. Researchers at Children's National Hospital, Washington have already developed an AI called Smart Tissue Autonomous Robot (STAR), which performs a colon anastomosis on its own with the help of an ML-powered suturing tool, that automatically detects the patient's breathing pattern to apply suture at the correct point.

An image of STAR during surgery.

Cloud computing in healthcare has helped in retrieving and sharing medical records safely with a reduction in maintenance costs. Through this technology doctors and various healthcare workers have access to detailed patient data that helps in speeding up analysis ultimately leading to better care in the form of more accurate information, medications, and therapies.

How can It help in Biomedical research?

Since AI can analyze literature beyond readability, it can be used to concise biomedical research. With the help of ML algorithms and NLP, AI can accelerate screening and indexing of biomedical research, by ranking the literature of interest which allows researchers to formulate and test scientific hypotheses far more precisely and quickly. Taking it to the next level, AI systems like the computational modelling assistant (CMA) helps researchers to construct simulation models from the concepts they have in mind. Such innovations have majorly contributed to topics such as tumour suppressor mechanisms and protein-protein interaction information extraction.

AI as precision medicine

Since precision medicine focuses on healthcare interventions to individuals or groups of patients based on their profile, the various AI devices pave the way to practice it more efficiently. With the help of ML, complex algorithms like large datasets can be used to predict and create an optimal treatment strategy.

Deep learning and neural networks can be used to process data in healthcare apps and keep a close watch on the patient's emotional state, food intake, or health monitoring.

"Omics" refers to the collective technologies that help in exploring the roles, relationships of various branches ending with the suffix "omics" such as genomics, proteomics, etc. Omics-based tests based on machine learning algorithms help find correlations and predict treatment responses, ultimately creating personalized treatments for individual patients.

How it helps in psychology and neuro patients

For psychologists studying creativity, AI is promising new classes of experiments that are developing data structures and programs and exploring novel theories on a new horizon. Studies show that AI can conduct therapy sessions, e-therapy sessions, and assessments autonomously, also assisting human practitioners before, during, or after sessions. The Detection and Computational Analysis of Psychological Signal project uses ML, computer vision, and NLP to analyze language, physical gestures, and social signals to identify cues for human distress. This ground-breaking technology assesses soldiers returning from combat and recognizes those who require further mental health support. In the future, it will combine data captured during face-to-face interviews with information on sleeping, eating, and online behaviours for a complete patient view.

Stroke identification

Stroke is another frequently occurring disease that affects more than 500 million people worldwide. Thrombus, in the vessel cerebral infarction is the major (about 85%) cause of stroke occurrence. In recent years, AI techniques have been used in numerous stroke-related studies as early detection and timely treatment along with efficient outcome prediction can help solve the problem. With AI at our disposal, large amounts of data with rich information, more complications and real-life clinical questions can be addressed in this arena. Currently, two ML algorithms- genetic fuzzy finite state machine and PCA were implemented to build a model building solution. These include a human activity recognition stage and a stroke onset detection stage. An alert stroke message is activated as soon as a movement significantly different from the normal pattern is recorded. ML methods have been applied to neuroimaging data to assist disease evaluation and predicting stroke treatment for the diagnosis.

Patient Monitoring

Today, the market for AI-based patient monitoring is impressive and monetarily enticing. It is evolving with artificial sensors, smart technologies and explores everything from brain-computer interfaces to nanorobotics. Companies with their smart-watches have engaged people to perform remote monitoring even when they are not "patients". An obvious place to start is with wearable and embedded sensors, glucose monitors, pulse monitors, oximeters, and ECG monitors. With patient monitoring becoming crucial, AI finds numerous applications in chronic conditions, intensive care units, operating rooms, emergency rooms, and cardiac wards where timeless clinical decision-making can be measured in seconds. More advances have started to gain traction like smart prosthetics and implants. These play an impeccable role in patient management post-surgery or rehabilitation. Demographics, laboratory results and vital signs can also be used to predict cardiac arrest, transfer into the intensive care unit, or even death. In addition, an interpretable machine-learning model can assist anesthesiologists in predicting hypoxaemia events during surgery. This suggests that with deep-learning algorithms, raw patient-monitoring data could be better used to avoid information overload and alert overload while enabling more accurate clinical prediction and timely decision-making.

## Conclusion

Considering the vast range of tasks that an AI can do, it is evident that it holds deep potential in improving patient outcomes to skyrocketing levels. Using sophisticated algorithms AI can bring a revolution in the health care sector. Even after facing challenges like whether the technology will be able to deliver the promises, ethical measures, training physicians to use it, standard regulations etc, the role of AI in transforming the clinical practices cannot be ignored. The biggest challenge is the integration of AI in daily practice. All of these can be overcome and within that period the technologies will mature making the system far more enhanced and effective.

Blackcoffer Insights 29: Sanskriti Sunderum and Aayushi Nauhar, SRCC, Delhi University

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```
In [7]: import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
```

```

complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('37.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.1347068604889834, 'negative_score': 0.8652931395110166, 'polarity_score': 0.1347068604889834, 'subjectivity_score': 0.46138875711501426, 'avg_sentence_length': 29.246753246753247, 'pct_complex_words': 0.7335701598579041, 'fog_index': 11.992129362644462, 'avg_words_per_sentence': 29.246753246753247, 'complex_word_count': 1652, 'word_count': 2252, 'avg_syllables_per_word': 1.6292184724689165, 'personal_pronoun_count': 27, 'avg_word_length': 5.176287744227354}

```

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```

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Data Science Artificial Intelligence Big Data Business Analytics Machine Learning What We Think What if the Creation is Taking Over the Creator?

By Ajay Bidyarth - June 25, 2021 11927

Human minds, a fascination in itself carrying the potential of tinkering nature with the pixie dust intelligence, creating and solving the mysteries and wonders with anything but admiration. However, no matter how captivating a human mind can be, it could sometimes be appalled. It could be the hunger or maybe the desire to want more, to go beyond and unravel the limitations, or maybe something like pure greed. Humans have never stopped and always keep evolving when it comes to intelligence and this is what makes them the supreme.

Intelligence calls out for supremacy and so, what if there was to evolve something that opposed a challenge to the very human minds, to their capabilities while making them question their own importance among themselves? Artificial Intelligence came as a revolution, havoc when it first came to the light. The concept of making machines does work on their own, like granting machines -The Intelligence.

The idea of making machines work like humans came back in the 19s. Back then people didn't believe in such a thing as making a non-living thing work, think, and carry tasks on its own, not to mention, to actually surpass humans themselves in those skills. The facts are it did. By 1997. The greatest chess player, Garry Kasparov was defeated in a chess game by a machine and this is where exactly, a top skilled human lost to a mere machine created by another who by himself could've never defeated him. It was a rule of power, of betterment, of skills, and the granted supremacy. Were AI and Machines just tools? Equipment? Something that helped an unskilled person with his mind and intelligence creates something that could do the skilled work for him with perfection and precision? Well initially it was, however, as time passed as humans got drawn to the puzzle of AI, a lot changed. Human research went deeper and deeper and as a result, the machines evolved with it.

At present, AI & Machines is a growing field. As it develops and improves, it has become a part of the industrial revolution. In industries, most of the laborious work that was once taken care of by humans was now replaced by machines. Naturally, with the evolution in machines, its precision, mass productivity, quality control, time efficiencies, and all the other factors made it a better choice. A choice over humans.

This led to fear, a fear of a not-so-distant future, a future where maybe machines will be so evolved that they'll take over the need of a human employee leading to unemployment. With the population increase around the world, it became the new tech threat for the labor market. Then again... how true is it? Does AI really oppose a threat? Will adapting to technology make millions of people lose their jobs? Will it lead to mass unemployment? Will the machines really surpass humans? Will, the creation take over the creator?

No matter how fearful the future with AI may seem, in reality, it is not that scary. Truth is AI is the present reality, it is the key that holds the power to unlock a whole next level of human evolution. Technology is growing. There was a time where technology was just an idea, but today that idea has been implemented, it's working and is carried out. Nobody could stop the advancement and growth of Artificial Intelligence, it's a wave that is already flowing and we as the present generation and the generations to come to have to learn, to learn to swim in this flow and avoid drowning.

Many jobs will be replaced by machines, as AI evolves it'll keep challenging human minds and their skills. With the present COVID 19 situation, contactless cashiers to robots delivering packages have already taken over the usual routine tasks. The jobs of Secretaries, Schedulers, and book-keeper are at risk too. Manufacturing units, agriculture, food services, retail, transportation & logistic, and hospitality are all a part of the AI-affected automation. At an estimation, it is said that around 20 million jobs, especially including manufacturing will be lost to robots. As AI, robotics, 3D printing, and genetics make their way in, even the architects, medical docs, and music composers feel threatened by technology. Making us question that will AI even edge us out of our brain jobs too? Now that can be terrifying.

However, as much as machines will be replacing few jobs, they'll also be creating new jobs. With the economic growth, innovation, and investment around 133 million jobs are said to be generated. These newly enhanced jobs are to create benefits and amplify one's creativity, strategy, and entrepreneurial skills. So what is the catch?

Well, it's the skills. Even though AI is creating 3 times more jobs than it is destroying, it's the skills that count. AI surged in new job opportunities, opportunities like Senior Data Scientist, Mobile Application Developer, and SEO specialist. These jobs were once never heard of but now with AI it's born, however, to do these jobs or for its qualification, one needs high-level skills and to acquire those skills can be an expensive and time-consuming task. The future generation might be able to cope up with it but the real struggle is to be faced by the present two generations. It's the vulnerability between the skill gap and unemployment and the youths are the ones to be crushed the most.

Therefore, as the advancement of AI becomes inevitable there remains no choice but to adapt, learn, equip ourselves and grow with it. The companies have to work together to build an AI-ready workplace. They should collaborate with the government, educators, and non-profit organizations and work together to bring out policies that could help understand the technologies' impacts faster while also providing the employees some security. The economic and business planning should be made considerable for minimizing the impact on local jobs and properly maximizing the opportunities.

The employees should be provided with proper tools to carry along with the new opportunities while acquiring AI-based skills for their day-to-day work. New skills should be identified and implemented for the upskilling and continual learning initiatives. Employees will have to maximize their Robotic Quotient and learn core skills. They'll have to adapt to new working models and understand their roles in the coming future.

However, it's not like AI will totally take over control, even though AI proves to be a better choice, it still has its limitations at present. First, it's expensive, secondly, manufacturing machines in bulk is not good for the environment. Machines are also very high maintenance, therefore human labor will often come cheaper and so will be considered over machines. Underdeveloped countries will find it hard to equip their people with the upskilling and reskilling required for AI workplace and so for AI to play a role in those countries, might take years. AI can also be risky and unethical, as it's hard to figure out who to be held responsible for in cases where an AI went wrong.

No matter, how advanced AI gets, there are some skills where humans will always have an upper hand i.e., soft skills. Skills like teamwork, communication, creativity, and critical thinking are something that AI hasn't been able to beat us up to yet and so the value of creativity, leadership, and emotional intelligence has increased. Although, with machines coming in between humans causing the lack of human-to-human interaction, the humans seem to fade away a little.

With this era, comes the need for good leaders. Leaders who are capable of handling both machines and humans together, the ones who are organized enough to manage the skilled and the unskilled employees while providing the unskilled trainees with proper training. Leaders who hold profound soft skills and encourage teamwork while wor

king along with machines. The ones who are patient, calm, and optimized.

In conclusion, yes AI and machines are going to be very challenging but there's nothing humans haven't overcome . Adaptation and up-gradation are going to be the primary factor for survival. As we witness the onset of the 4 th industrial revolution, let's buckle up our seats and race along the highway with the essential fuels (skills ) so as to not let ourselves eliminated. After all, this is an unending race with infinity as the end, all we could do is try not to run out of fuel. Try not to be outdated.

Blackcoffer Insights 29: Gladys, Karunya Institute of Technology and Sciences.

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Data ScienceArtificial IntelligenceBig DataBusiness AnalyticsWhat We Think What Jobs Will Robots Take From Humans in The Future?

By Ajay Bidyarthi - June 25, 2021 8499

## Introduction

AI is rapidly evolving in the employment sector, particularly in matters involving business and finance. Finance, management, economics, and accounting are now among the most popular university courses globally; particularly at the graduate level, due to their high employability. However, the evolution of machinery in industries is changing that. According to research, 230,000 jobs in these sectors may be replaced by AI agents in the next 5 years. This is due to the nature of the work, as employees are responsible for tasks such as data analysis and keeping track of numerical information; which machines excel at. Large, complicated data sets can be analyzed faster and more efficiently by AI-powered computers than by people. Algorithmic trading procedures that produce automated deals are less likely to be produced without minute errors when undertaken by humans. In such matters involving industrial work, a subsection of artificial intelligence is used; namely, machine learning.

Machine learning is a term used for the application of artificial intelligence (AI) in systems, which involves

them assimilating and processing information by gaining experience. It is mainly concerned with the development of technology and computer programs.

Its improvement process is mainly divided into seven steps; which start with the collection of data. This data can be collected from an internal database or perhaps an IoT structure. The second and most time-consuming step is cleaning, preparing, and rearranging the data; which involves the recognition of outliers, trends, and missing information so that the outcome is as accurate as possible. The third step consists of formatting data; which is useful if you source your information from a variety of sources. Step four is where AI comes into place. Self-service data processing tools may be useful if they provide intelligent services for matching data attributes from distinct databases and intelligently integrating them. The data is then arranged to better represent a specific pattern. Lastly, the data is divided into two sets: one for training the algorithm and one for analysis.

There are three types of machine learning; supervised, unsupervised, and reinforcement learning. The most common of the bunch is supervised machine learning; which is based on accurately labeled data. The machine is given a collection of information, including the outcome of the operation. The rest of the information is referred to as 'input features', which 'supervises' the machine by guiding it to establish the connections between the variants.

In the case of unsupervised learning, the machine isn't given labeled sets of data to be divided into, allowing it to recognize and create its own patterns within the information provided. Since computers have the capabilities of identifying distinguished similarities, this method helps with the classifying of such data.

Reinforcement learning comprises experience-based learning. Similar to people, they learn due to a reward and punishment system based on their actions.

These variations of system learning have recently been integrated into business and finance, which is elaborated on in the following passages.

#### Machine learning in finance and banking

There are many ways in which machine learning is used in finance and banking. The most common place it is used is to detect any frauds. Fraud is the most common problem in financial service companies and it accounts for billions of dollars in misfortune each year. The most common frauds are credit or debit card usage by a stranger, document forgery, and mortgage fraud.

Usually, finance companies keep an enormous amount of their data stored online, and it increases the risk of information being accessed without authorization. With expanding innovative headway, misrepresentation in the monetary business is currently viewed as a high danger to significant information. Fraud recognition frameworks in the past were planned dependent on a bunch of rules, which could be effortlessly be bypassed by current fraudsters. Therefore, most companies today leverage machine learning to combat fraudulent financial transactions.

Machine learning works by looking over enormous informational indexes to distinguish unique or suspicious activities for additional examination by security groups. It works by looking at an exchange against other information focuses – like the client's record history, IP address, area, and so forth. Depending on the type of exchange taking place, the program can automatically refuse a withdrawal or purchase until the person makes a decision.

Examples of fraud detection software used by banks include Feedzai, Data visor, and Teradata

Machine learning is also used in algorithmic trading, portfolio management, loan underwriting, chatbots, and improving customer service.

Algorithmic trading is an interaction for executing orders using computerized and pre-modified exchanging guidelines to represent factors like value, timing, and volume. An algorithm is a set of directions for solving a problem. Computer calculations send little parts of the full request to the market over the long run.

In contrast to human dealers, algorithmic exchanging can investigate enormous volumes of information every day and therefore make thousands of trades every day. Machine learning settles on quick exchanging choices, which gives human traders a benefit over the market normal. Likewise, algorithmic exchanging doesn't settle on exchanging choices dependent on feelings, which is a typical constraint among human dealers whose judgment might be influenced by feelings or individual desires. The exchanging technique is generally utilized by multifaceted investment administrators and monetary foundations to automate trading activities.

In the banking industry, organizations access a large number of shopper information, with which machine learning can be prepared to work in order to simplify the underwriting process. Machine learning calculations can settle on speedy choices on endorsing and credit scoring, and save organizations both time and monetary assets that are utilized by people.

Data scientists can train algorithms on how to analyze millions of consumer data to coordinate with information records, search for interesting special cases, and settle on a choice on whether a shopper meets all requirements for an advance or protection. For instance, the calculation can be prepared on the most proficient method to examine shopper information, like age, pay, occupation, and the buyer's credit conduct.

#### The benefits of machine learning

As with any form of revolutionary technology, the usage of machine learning has been debated over as its beneficial properties have been weighed against the possible disadvantages. It's been observed that upon correct usage, it may be used to solve a wide range of business challenges and anticipate complicated customer behavior. We've also seen several of the largest IT conglomerates, such as Google, Amazon, and Microsoft, introduce Cloud Machine Learning platforms.

#### Technology vs Human intelligence

In terms of business, ML can aid businesses by identifying consumer's demands and formulate a pattern based on them; allowing companies to reach out to such consumers and maximize their sales. It eliminates the need for expenses on some maintenance by reducing the risks associated with unexpected breakdowns and minimizes wasteful costs to the firms. Historical data, a process visualization tool, a flexible analytical environment, and a feedback loop may all be used to build an ML architecture. The input of data is another agitating chore for businesses in the present, which is where machine learning can step in for manual labor. This eradicates the possibility of errors caused by manual labor causing disruptions and provides employees with extra time to handle other tasks.

In the financial sector, machine learning is already utilized for portfolio management, algorithmic trading, loan underwriting, and fraud detection. Chatbots and other conversational interfaces for security, customer support, and sentiment analysis will be among the future uses of ML in banking. Another aspect of business involving artificial intelligence includes image recognition, which entails a system or program that recognizes objects, people, places, and movements in photos. It identifies photographs using an imaging system and machine recognition tech with artificial intelligence and programmed algorithms.

#### The downfalls of machine learning

With all the benefits of its advancement, machine learning isn't the most perfect thing. There are several disadvantages which are information acquisition, time and resources and high errors, and wrong interpretations. One of the major hurdles is the amount of finance needed to invest in machine learning for it to be a successful project. More issues have to do with the fact that AI requires gigantic informational indexes to train on, and these ought to be unbiased, and of good quality. There can likewise be times where they have to wait for that new information to be produced. Machine learning needs sufficient opportunity to do the calculations to learn and adequately to satisfy their accuracy and relevancy. It also needs huge resources to work. This can mean extra requirements for the computer to work. Another significant problem is the capacity to precisely decipher the results produced by the calculations. You should likewise cautiously pick the algorithms to get the wanted results.

## Conclusion

There have been various reports in the past and current years which claim that a significant piece of the human labor force will be replaced via robots and machines in the years to come. With excessive innovative work being led in the field of computerized reasoning, many dread that a significant job crisis will unfurl since numerous positions are all the more precisely and productively performed with the use of machines. In countries like Japan, mainly computer programs and AI is used in the secondary and tertiary sectors. From cleaning the house to depositing money in banks, everything is done by AI. However, AI cannot replace humans in the future. Humans have several capabilities which, even after several technological advancements a machine would not be able to have. These capabilities include creative thinking and creative problem solving, and human connection. For example, when a child goes to a doctor to get an injection, a nurse always relaxes the child to not be afraid of the needle. A machine's touch would not be able to soothe a child. Another example could be how humans tend to share things with each other and be open about it, a machine will not be able to do so since it is only programmed to do what it has been told to do. Like computers, AI will not replace us but would however complement us to make daily work easier and less time-consuming. Without humans themselves, there is no future for AI.

Blackcoffer Insights 29: Amara Arora and Vaanya Kaushal, Scottish High International School

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## Will AI Replace Us or Work With Us?

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By Ajay Bidyarth - June 25, 2021 8637

"Anything that could give rise to smarter-than-human intelligence – in the form of Artificial Intelligence, brain-computer interfaces, or neuroscience-based human intelligence enhancement – wins hands down beyond contest as doing the most to change the world. Nothing else is even in the same league."

–Eliezer Yudkowsky, AI Researcher

There's no denying robots and automation are increasingly part of our daily lives. Just look around the grocery

store, or the highway, they are everywhere. This makes us wonder what if AI can replace human intelligence? What can we do to make ourselves relevant tomorrow? Let us try to find the answers to all these questions and more.

Let's first understand what is Artificial Intelligence -

Artificial Intelligence or AI basically machines displaying intelligence. This can be seen from a machine playing chess or a robot answering questions on Facebook. Artificial Intelligence can be further broken down into many different types. There are AIs designed to do specific tasks, such as detecting a specific type of cancer. However, there are also AIs that can do multiple tasks, such as driving a car. There are many types of AIs. Among the top, most important fields are Machine Learning or ML, Neural Network, Computer Vision, and Natural Language Processing or NLP.

Machine Learning is the idea of machines being able to prove themselves similar to how a human being learns a new skill. Machine Learning also allows for the optimization of an existing skill. Machine Learning is used in many different fields and one such application is entertainment. Netflix uses Machine Learning to recommend more shows that you can watch based on the shows that you have already seen.

Neural Networks are algorithms that are modeled after the human brain. These algorithms think just like we do which can thereby give similar results to what a human being can give. Artificial Neural Networks are used in medical fields to diagnose cancers like lung cancer and prostate cancer.

Computer Vision is the idea that computers have visions. This allows them to see things the way human beings do or potentially better than human beings do, depending on the programming, camera used, etc. Computer Vision is used in autonomous vehicles for navigation from one place to another.

Natural Language Processing is the idea that computers can listen to what we say. An example of this is Siri. Siri is able to listen to our demands, process what it means, and provide you an answer based on what is researched.

Now that we know what an AI is and what it can do, Let's talk about the issue.

WILL MACHINE REPLACE THE HUMAN IN THE FUTURE OF WORK?

AIs allow for the automation of jobs, thereby replacing what humans already do. This means more job loss and the concentration of wealth to the selected few people. This could mean a destabilization of society and social unrest. In addition to social unrest, AI improves over time. This means it becomes smarter, faster, and cheaper to implement and it will be better at doing repetitive things that humans currently do, such as preparing fast food. It is predicted that AI will improve so much over 50 to 100 years that AI will become super intelligent. This means that it will become even smarter than the most intelligent human on earth. According to many experts such as Elon Musk, this could cause the end of human civilization. AI could potentially start a war against humans, burn crops and do all sorts of tragedies once reserved for human functions. At that point, in theory, we cannot stop it because AI would have already thought of all the obstacles that will prevent its goal. This means that we cannot unplug the machine, in effect AI will replace human intelligence.

But, will this happen in next 10 to 30 years?

NO! The field of Artificial Intelligence is sophisticated enough to do many human tasks that humans currently do. Currently, AI is not smart enough to be empathetic to humans and cannot think strategically enough to solve complex problems. AI solutions can be expensive and have to go through many different tests and standards to implement. It also takes time for AI to improve. For example, Boston Dynamics, one of the world's top robotics company had a robot in 2009 that needed assistance to walk. Fast forward to 2019, not only the robot could walk by itself but it could jump over objects, do backflips and so much more. In addition to the timing, it takes time for the price of any new technological solution to drop to a point where it is affordable. For example, a desktop computer costs around \$1000 in 1999 but now you can get a significantly more powerful laptop for the exact same price. AI will go through the same curve.

But what happens after those 10 to 30 years? Will AI make human intelligence obsolete? Maybe. As we have proven earlier AI will become faster better and cheaper. As this happens, more and more companies will use AI technology to automate more and more jobs to save money, increase productivity, and most importantly, stay competitive. As we have demonstrated, AI will become better through repetition via the use of machine learning. The only difference is that AI will be able to learn faster as time progresses due to the amount of data that is available today. It will also be able to learn from other machines or similar machines to learn how to optimize its tasks or new important skills. However, AI also just not do repetitive and routine tasks better, it will also be able to understand emotional intelligence, ethics, and creativity. This seen in three distinct example- IBM

IBM uses its IBM Watson to program the AI to create a movie trailer. Fox approached IBM and said they have a movie coming out on AI #SciFi horror. They asked IBM if their platform IBM Watson could a trailer by reviewing and watching the footage and searching for scary,

WILL MACHINE REPLACE THE HUMAN IN THE FUTURE OF WORK?

Sad or happy or other moments in the movie that provoked quality emotions based on how the machine was programmed to identify such emotions in a quantifiable manner. IBM Watson was able to generate a trailer for the movie Morgan. The result, a movie trailer created by machines example – Google

IN 2018 google demonstrated an AI assistance that could take calls and do simple stuff. The AI was able to set up an appointment! What was more fascinating was that it was able to understand the nuances of the conversation. The receptionist thought it was a human being that was calling her. That is a very primitive version of what is possible with this technology. Eventually, it will be able to have conversations just as human beings do, making many sales jobs obsolete. example – AI generated art

In 2018, a Paris art collective consisting of three students used artificial intelligence to generate a portrait. It generated the portrait painting by studying a set of fifteen thousand art images on wiki art. It was estimated to be worth between seven thousand to ten thousand dollars. The painting sold at an auction for four thirty-five thousand US dollars.

However, we cannot for sure say that AI will replace human intelligence. This is because we as a society have started asking hard questions and questioning ethics. Elon Musk founded Open AI, a research lab whose whole purpose is to promote and discover artificial intelligence in a way to benefits humanity. In addition to this, there are many factors that affect the long-term outcome of AI replacing human intelligence. Like, to what degree will other humans allow for AI to take over? Depending on the field, do people even want Artificial Intelligence to help them? Or will they prefer a human counterpart? While we may not be able to control what happens in the long run, we can definitely secure our short-term future.

Here are the top five skills that will not become obsolete in the near future

Strategic and creative thinking

The ability to think outside the box is very human. There are thousands upon thousands of slightly different possible outcomes that may result from every distinguishable action that the human mind with its ability to judge from experience is programmed for these purposes in a far more sophisticated manner than AI can currently achieve. As the billionaire founder of Alibaba, Jack Ma famously said – "AI has logic, human beings have wisdom".

Conflict resolution and negotiations

With our understanding of the complexities of human-related processes and our ability to improvise and judge, we are far better equipped to deal with conflicts than robots are ever likely to be.

WILL MACHINE REPLACE THE HUMAN IN THE FUTURE OF WORK?

Emotional Intelligence and Empathy

AI may be able to recognize faces and images but it can rarely successfully read the feelings of those faces. Humans, to lesser or greater degrees, are capable of an accurate analysis of emotional subtext. With the applica

tion of intuition and the use of delicately worded or elusive languages, through these methods, we are able to properly judge how a person feels.

#### Interpretation of Gray Areas

Robots and computers function well when presented with quantifiable data. However, once the situation enters a gray area, whether this term refers to morals, processes, or definitions robots are more likely to falter.

#### Critical thinking

Humans are capable of responding to more indicators of quality than computers are. While an AI system may be able to analyze documents according to the true or false statements made within the text, we can judge whether or not it is well written and analyze the implication of the use of certain words and the overall meaning of the content.

Blackcoffer Insights 29: Fiza Parveen, Shri Govindram Institute of Technology and Science, Indore

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By Ajay Bidyarth - June 25, 2021 7890

"Machine intelligence is the last invention that humanity will ever need to make"  
Nick Bostrom

To put it frankly, Artificial Intelligence will eventually replace jobs. Workers in a variety of industries, from healthcare to agriculture and manufacturing, should expect to witness hiring disruptions as a result of Artificial Intelligence.

If history has taught us anything, it is that disruptive paradigm-shifting business ideas not only make a fortune for the innovators, but they also build the groundwork for new business models, market entrants, and job opportunities which will inevitably follow. It is true that robots today or in future will eventually replace huma

ns for many jobs, but so did innovative farming equipment for humans and horses during the industrial revolution. But that does not mean that our jobs as humans will end here. We, on the other hand, will be required to generate and provide value in whole new ways for entirely new business models as a result of these changes. According to 71% of the businesses worldwide, Artificial Intelligence can help people overcome critical and challenging problems and live better lives. Artificial Intelligence consultants at work will be more or equally fair, according to a whopping 83% of corporate leaders. These results demonstrate that Artificial Intelligence is steadily extending its measures, yielding societal benefits and allowing citizens to live more fulfilling lives.

#### Increase in Automation and Jobs where humans can't compete

Since the advent of Industry 4.0, businesses are moving at a fast pace towards automation, be it any type of industry. In 2013, researchers at Oxford University did a study on the future of work. They concluded that almost one in every two jobs have a high risk of being automated by machines. Machine learning is responsible for this disruption. It is the most powerful branch of artificial intelligence. It allows machines to learn from data and mimic some of the things that humans can do.

A research was conducted by the employees of Kaggle wherein an algorithm was to be created to take images of a human eye and diagnose an eye disease known as diabetic retinopathy. Here, the winning algorithm could match the diagnosis given by human ophthalmologists. Another study was conducted wherein an algorithm should be created to grade high school essays. Here too, the winning algorithm could match the grade given by human teachers. Thus, we can safely conclude that given the right data, machines can easily outperform human beings in tasks like these. A teacher might read 10,000 essays over a 40-year career; an ophthalmologist might see 50,000 eyes but a machine can read a million essays and see a million eyes within minutes.

Thus, it is convenient to conclude that we have no chance of competing with machines on frequent, high volume tasks.

#### Tasks where machines don't work

But there are tasks where human beings have an upper hand, and that is, in novel tasks. Machines can't handle things they haven't seen many times before. The fundamental rule of machine learning is that it learns from large volumes of past data. But humans don't; we have the ability of seemingly connecting disparate threads to solve problems we haven't seen before.

Percy Spencer was a physicist working on radar during World War 2 where he noticed that the magnetron was melting his chocolate bar. Here, he was able to connect his understanding of electromagnetic radiation with his knowledge of cooking in order to invent the microwave oven. Now this sort of cross pollination happens to each one of us several times in a day. Thus, machines cannot compete with us when it comes to tackling novel situations.

Now as we all know that around 92% of talented professionals believe that soft skills such as human interaction and fostering relationships matter much more than hard skills in being successful in managing a workplace. Perhaps, these are the kind of tasks that machines can never compete with humans at.

Also, creative tasks: the copy behind a marketing campaign needs to grab customers' attention and will have to stand out of the crowd. Business strategy means finding gaps in the market and accordingly working on them. Since machines cannot outperform humans in novel tasks, it will be humans who would be creating these campaigns and strategies.

Human contact would be essential in care-giving and educational-related work responsibilities, and technology would take a backseat. Health screenings and customer service face-to-face communication would advocate for human contact, with Artificial Intelligence playing a supporting role.

So, what does this mean for the future of work? The future state of any single job lies in the answer to one single question: to what extent is the job reducible to tackling frequent high-volume tasks and to what extent does it involve tackling novel situations?

Today machines diagnose diseases and grade exam papers, over the coming years they're going to conduct audits, they're going to read boilerplate from legal contracts. But does that mean we're not going to be needing accountants and lawyers? Wrong. We're still going to need them for complex tax structuring, for path-breaking litigation. It will only get tougher to get these jobs as machine learning will shrink their ranks.

Amazon has recruited more than 100,000 robots in its warehouses to help move goods and products around more effectively, and its warehouse workforce has expanded by more than 80,000 people. Humans pick and pack goods (Amazon has over 480,000,000 products on its "shelves"), while robots move orders throughout the enormous warehouses, therefore reducing "the amount of walking required of workers, making Amazon pickers more efficient and less exhausted." Furthermore, because Amazon no longer requires aisle space for humans, the robots enable Amazon to pack shelves together like cars in rush-hour traffic." More inventory under one roof offers better selection for customers, and a higher density of shelf space equals more inventory under one roof.

#### Kodak Vs Instagram

Kodak, once an undisputed giant of the photography industry, had a 90% share in the USA market in 1976, and by 1984, they were employing 1,45,000 people. But in the year 2012, they had a net worth of negative \$1 billion and they had to declare bankruptcy. Why? Because they failed to predict the importance of exponential trends when it comes to technology. On the other hand, Instagram, a digital photography company started in 2012 with 13 employees and later they were sold to Facebook for \$1 billion. This is so ironic because Kodak pioneered digital photography and actually invented the first digital camera but unfortunately thought of it as a mere product and didn't pay attention towards it and this created the problem.

We live in an era of artificial intelligence (AI), which has given us tremendous computing power, storage space, and information access. We were given the spinning wheel in the first, electricity in the second, and computers in the third industrial revolution by the exponential growth of technology.

#### Airbnb and its breakthrough idea!

Airbnb, which is a giant start-up and is known for enabling homeowners to rent out their homes and couches to travellers, for example, "is now creating a new Artificial Intelligence system that will empower its designers and product engineers to literally take ideas from the drawing board and convert them into actual products almost instantly." This might be a significant breakthrough whether you're a designer, engineer, or other type of technologist.

#### Differences that Automation brings onto the table:

There are three key changes that automation can bring about at the macro level:

Changes in capability demandGender imbalance in workforce redeploymentFirm reorganization.

#### Sectors that might be in trouble

Artificial Intelligence isn't just a fad. Tractica, a market research firm, published a report in 2016 that predicted "annual global revenue for artificial intelligence products and services will expand from 643.7 million in 2016 to \$36.8 billion by 2025, a 57-fold increase over that time span." As a result, it is the IT industry's fastest-growing segment of any size."

The reduction in need for people as a result of Artificial Intelligence and related technologies, which resulted in job layoffs, was a cause of fear. In India alone, job losses in the IT sector have reportedly reached 1,000 in the last year, owing to the integration of new and advanced technologies like artificial intelligence and machine learning.

Most of the IT companies such as Infosys, Wipro, TCS, and Cognizant have reduced their employee base in India and are recruiting less, while engaging more personnel in the United States and investing heavily in "centres of

innovation." Artificial Intelligence and data science, which are currently the trending aspects that require fewer people and are primarily located abroad, aren't helping the prospects of local employees. Another factor is that the computer industry is continuously growing and would develop to a size of two million workers. Unfortunately, it's a drop in the bucket compared to what robots are doing to Information Technology's less-skilled brothers.

Large e-commerce sites that used to be operated by armies of people are now manned by 200 robots produced by GreyOrange, which is an Indian company based out in Gurgaon. These indefatigable robots lift and stack boxes 24 hours a day, with only a 30-minute break for recharging, and have cut employees by up to 80%. For efficiency, this is a victory but a disaster for job prospects.

#### Concluding remarks

Internal re-skilling and redeployment of staff is a critical requirement of the hour. Artificial intelligence has presented Indian policymakers with epistemological, scientific, and ethical issues. This requires us to abandon regular, linear, and non-disruptive mental patterns. The tale of artificial intelligence's influence on individuals and their occupations will only be told over time. It is up to us to upskill ourselves and look for ways to stay current with the industry's current trends and demands.

So, will machines be able to take over many of our jobs? The answer is a resounding yes. However, for every job that is taken over by robots, there will be an equal number of positions available for people to do. Some of these human vocations will be artistic in nature. Others will necessitate humans honing superhuman cognitive abilities. Humans and machines can form symbiotic relationships, assisting each other in doing what they do best. In the future, people and machines may be able to collaborate and work together towards a common goal for any business they work for.

Blackcoffer Insights 29: Syed Basir Quadri and Sanchita Khattar, K J Somaiya Institute of Management

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## Introduction

Where is this disruptive technology taking us? Take it or leave it, disruptive technology always creates new jobs much more than depleted jobs. You might notice certain jobs disappearing but those jobs are the jobs that transform humans to robots, to machines, and the technology is creating machines to replace them. Technology creates the data analysis tools to manipulate and create custom scenarios using artificial intelligence (AI), Big Data and Machine Learning (ML) algorithms to predict and drive consumer behavior. Data Analytics tools, such as Google Analytics , and others are available today for free, and, if used correctly, can help organizations save millions, maybe billions of dollars of sales and marketing.

### How machine will replace humans?

Before I go on, I think it's best to level set on what constitutes machines. In the context of this article , machines describe computers and computerized equipment, like robots, that have been programmed to learn, sometimes like humans. Occasionally we call this Artificial Intelligence (AI), other times we call this machine learning, and still other times we call this robotics. And yes, these are technically different things. These bots are more efficient than humans in some specific domains and are growing smarter with each passing day. They can do some really tough tasks which are considered difficult for any human being. But, within the broad discussion related to the future of work, these are totally interrelated. Factory floors deploy robots that are increasingly driven by machine learning algorithms such that they can adjust to people working alongside them. A machine can work efficiently only if it has abundant data and information about the work which is being imparted daily to them. But with every forward step & advancement in technology, a threat is proliferating, a threat of being replaced on our work front. Every passing day is sealing some jobs for humans all over the globe. Similarly, AI is being used to turn hand-drawn sketches (done by humans) into digital source code.

### Role of Machines in Companies and its future:

Companies are clearly developing their AI and robotics expertise with the idea that through these technological innovations they'll be able to cut costs increase efficiencies offer new value proposition execute new business models or all of the above. Of course, it's not just machines and creatives working together either. In another example, Amazon has employed more than 100,000 robots in its warehouses to efficiently move things around while it has increased its warehouse workforce by more than 80,000. Humans, in Amazon's case, do the picking and packing of goods while robots move orders around the giant warehouses, essentially cutting "down on the walking required of workers, making Amazon pickers more efficient and less tired." Plus, the robots "allow Amazon to pack shelves together like cars in rush-hour traffic because they no longer need aisle space for humans. The greater density of shelf space means more inventory under one roof, which means better selection for customers."

### Why Machines can replace humans?

During the next few decades (or maybe sooner), the notion of work and whether it is handled by a human or a virtual being will hinge on predictability. As they are starting to do today, machines will manage the routine while humans take on the unpredictable – tasks that require creativity, problem-solving, and flexibility. In this context, robotics should be seen not only as a means to improve operations efficiency but also to improve the quality of life for workers.

Although it is obvious that human factors involved in a work activity impact job automation, it is also true that highly repetitive tasks—and even mechanical ones—are ideal for robots. Besides greater efficiency and speed, automation leads to a lower risk of accidents, greater control and autonomy, and above all, fewer costs for organizations.

### Are Machines more diligent than humans?

Although artificial intelligence and machine learning make us believe that robots are endowed with superior intelligence, in fact they don't yet have the ability to learn from experience and to respond to unknowns. So as things stand, however much processing speed and automatic learning a robot has, it doesn't beat factors innate to the human brain. Humans are still a very essential part of the process. Think about delivering services to a client. Most customer challenges are routine, but humans play a very important role in addressing new issues, solving them the first time they appear, and then consolidating the process into the system.

### Machines vs. Humans – Which is premium?

While machines and humans are placed in proximity, robots can be expensive, but this doesn't apply to all types, especially those based on Robotic Process Automation (RPA), where the development process incorporates algorithms that significantly reduce costs.

Moreover, think of how domestic robots—be it a vacuum cleaner, a lawn mower or a pool cleaner—are increasingly part of our daily lives. This level of consumption that robotics has attained makes it affordable to automate tasks in modern homes to obtain greater control, security and comfort.

### Man and Machines together

The division between humans and machines has been clear – I'm here, the machine is there – but that boundary is getting fuzzier. Smart prosthetics fuse seamlessly with our bodies, making up for lost limbs or providing additional strength, stability, or resilience, as seen in exoskeletons donned by assembly line workers.

We use our smartphones symbiotically, but what if they were integrated directly into our bodies? Think a smartphone in the form of a contact lens capable of transparently delivering augmented reality images straight to the brain. Think it sounds like science fiction? Think again. The first prototypes have already been built.

Soon, brain-computer interfaces could become seamless as well, creating a new synergistic relationship between the cloud and us. At that point, the question of who knows what would be moot; you ask me a question and I know the answer. Sometimes that answer will be stored in my own neural circuitry, but most of the time it would come from the connection of my neurons to the web. Our brain's decision process is influenced by the way it has been "educated" by the cultural context. These external factors are influencing our decision processes to the point that in certain situations, we can legitimately claim that influence has been so strong that our brains can't be held accountable for the choices made. The point I'm trying to make is that we humans are in symbiosis with our cultural environment and the tools – both physical and conceptual – that we have been taught to use. My guess is that the transformation will be subtle.

### Conclusion

Practically speaking, robots growing to the point that they take over the world and then start creating smarter , better robots are impractical and should not even be a concern. None of this is expected in the near future, not by a long shot. If you've been to an ATM, waited for a PC to boot up after a catastrophic failure, or had a game crash on your X box just when you were about to reach a checkpoint, you understand that we are not in a world where machines do everything perfectly right. Before they can take over all of our jobs, they need to be able to do theirs' flawlessly; until then, we can depend on humans to mess up our lives.

This isn't a win-or-lose situation. We're going to wind up as a partner to our smarter machines, and that part

ership will be fostered by our augmentation through technology. Machines will play an essential role in this augmentation and, as with any successful technology, they will fall below our level of perception. In the end, the revolution will be silent and invisible.  
Blackcoffer Insights 29: Swapna. G, Nivashiniya. R, Sri Manakula Vinayagar Engineering College(SMVEC), Puducherry

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## Big Data Problem & Solutions

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url = "https://insights.blackcoffer.com/in-future-or-in-upcoming-years-humans-and-machines-are-going-to-work-to"

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("43.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
```

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By Ajay Bidyarthi - June 24, 2021 7964

In future or in upcoming years humans and machines are going to work together in every field of work. In upcoming days machines will be the need for every human being. Machines [AI technology] will do the work which humans are incapable of doing. Machines will partner and co-operate with humans.

According to the professor at the university of Washington, he explained that, as a result of AI, there will be more demand for existing jobs and new jobs will be created that are unimaginable today. Human workers and machines will work together flawlessly, complementing each other. Machines will learn to carry out easier tasks such as following processes or crunching data. They will also help the humans while difficult. Machines or AI will create a great job opportunities for humans in future. John Kelly ll, executive vice president of IBM once said that "Man and Machines working together always beat or make a better decision than a man or a machine independently."

In future, the three sectors of our country like agriculture sector, industrial sector and service sector are going to utilize the machines. So, that their work becomes not difficult. As of now, we can only see that for agriculture purposes various kinds of machines are used which we called as a modern farming method. Some major technologies [machines] that are harvest automation, autonomous tractors, seeding, and weeding and drones. As a result, farms can do agriculture peacefully. In the industrial sector also humans and machines are working together.

her to increase production. Various types of machines are used in industries such as packing machines, loading machine etc. humans provide instructions to the machines and maintain the management in the company. Soon robots [machines] will assist doctors with surgeries. For instance, a doctor at remote location could direct a surgical robot to perform an open heart surgery. But the approaches option and decision will be left to experience and wisdom of the doctor not the robot.

What do you think of machines if they will make humans less or more in the field? Machines will push human professionals up the skillset ladder into uniquely human skills such as creativity, social abilities, empathy, and sense-making, which machines cannot automate. As a result, machines will make the workplace more, not less for humans. However, humans have to learn new skills throughout their lives. It is said that in the future 80% of process-oriented tasks will be done by machines. Quantitative reasoning tasks will be done approximately 50% by humans and 50% by machines, while humans will continue to do more than 80% of cross-functional reasoning tasks. According to Harvard research machines, algorithms can read diagnostic scans with 92% accuracy. Humans can do it with 96% accuracy. Together, it will be 99% accurate.

Human-machine collaboration enables companies to interact with employees and customers in the novel, more effective ways. Smart machines are helping humans to expand their abilities in three ways. They can amplify our cognitive strengths; interact with customers and employees to free us from higher-level tasks, and embody human skills to extend our physical capabilities. In the research, it was found that 1,500 companies achieve the most significant performance improvement when humans and machines work together. New machine systems have beyond-human cognitive abilities, which many of us fear could potentially dehumanize the future of work. Machines will indeed automate most repetitive and physical tasks, and part of quantitative tasks such as programming and even data science. According to D.E Shaw Group and professor at the University of Washington, explained that, as a result of machines, there will be more demand for existing jobs, and new jobs will be created that are unimaginable today. This is similar to how we couldn't imagine a web app developer decades ago, and now millions make a living doing that today.

Machines are good at doing tasks with speed, precision, and accuracy. But machines are not very good at responding to unknown situations or making judgments. That part will be left to humans. Hence, the need for both humans and machines will be there in the future. Humans and machines have divergent skill sets that, when combined can transform the way we work. Machines have already infiltrated every aspect of our lives, and we must learn to live with them. In the future, human workers will interact more closely with humans.

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from bs4 import BeautifulSoup

url = "https://insights.blackcoffer.com/how-neural-networks-can-be-applied-in-various-areas-in-the-future/"

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("44.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
```

```
-----
AttributeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_30512\3969447235.py in <module>
      13
      14 # Find the article text
----> 15 article = soup.article.get_text()
      16
      17 # Print the results
```

```
AttributeError: 'NoneType' object has no attribute 'get_text'
```

```
In [18]: import requests
from bs4 import BeautifulSoup

url = "https://insights.blackcoffer.com/how-machine-learning-will-affect-your-business/"
```

```

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using BeautifulSoup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("45.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)

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By Ajay Bidyarth - May 29, 2021 7410

Machine learning techniques may have been used for years, but recently there has been an explosion in their applications. In fact, in a recent Q3 earnings call, Google CEO Sundar Pichai said “Machine learning is a core, transformative way by which we’re re-thinking how we’re doing everything.” And they’re far from the only business making that claim.

In the past, successful use of machine learning algorithms required bespoke algorithms and huge R&D budgets, but all that is changing. IBM Watson, Microsoft Azure, Amazon, and Alibaba all launched turnkey cloud-based machine-learning SaaS solutions in 2015. At the same time startups like Idibon, MetaMind, Dato, and MonkeyLearn have built machine learning products that companies can take advantage of.

Gartner already puts machine learning at the top of its hype curve, and no: machine learning won’t replace all of your employees with computers or suddenly double your revenue. But that doesn’t mean that it can’t give every business a competitive advantage. There are plenty of business processes that can significantly benefit from machine learning. So how does machine learning change the way businesses operate?

Fig: Machine learning techniques For Business

**Bigger upfront costs**

First thing’s first: Machine learning needs training data and training data costs money. Especially training data labeled by humans. Let me explain. To make machine learning work for business, the algorithm needs to see lots and lots of examples of what it’s supposed to be doing. If you want an algorithm to tell you if a sales lead is good, you need to show it lots and lots of examples of good sales leads and bad sales leads. If you want an algorithm to tag the support tickets you need to show it many examples of support tickets. If you localize your algorithm to a new language you probably need to collect lots of examples in that language. In some instances, a company may have those training sets in-house. For example, a bunch of disqualified or qualified leads. But say you haven’t labeled each of your support tickets as they’ve come in over the year. You’d need to have people either in-house or en masse via a data enrichment platform -label those tickets. The machine will then look at those judgments and start finding connections and patterns it can learn from.

**Much lower ongoing costs**

Machine learning is much cheaper and more efficient than people when it works well. The downside is that it often works well in 80 percent of the cases and badly in 20 percent of the cases, and lowering the 20 percent error rate is hard, if not impossible. But even an 80 percent accurate algorithm can save you a lot of money because good machine learning algorithms know where they are accurate and where they are more likely to have errors. Smart companies take the cases where the algorithm has high confidence and uses those directly while sending low confidence cases to humans. Banks have been doing this for years. When you put a check in an ATM, an algorithm tries to decipher the numbers on the check. If you have really sloppy handwriting or the ink is smudged the algorithm passes the task to a human. This design pattern saves banks lots of money while preserving a very high level of accuracy.

**Your costs will drop over time**

A huge benefit of machine learning is that it can turn part of your variable cost into more of a fixed cost. If you use humans to handle cases where that algorithm is struggling, you are creating the perfect training data to feed into your algorithm. This is a well-studied technique called active learning it turns out that training data labels collected on cases where the algorithm has low confidence help the algorithm learn much, much more efficiently.

As the algorithm becomes increasingly more accurate, the unit economics of your business process become better and as machine learning becomes able to handle more cases, the expensive humans are only called in on the toughest, rarest situations. That means you use the best of both human and machine intelligence in tandem: leveraging the speed and reliability of computers for the easy judgments and the fluency and expertise of humans for the

difficult ones. And if that sounds like smart business, it's because it is.  
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# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("46.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
```

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By Ajay Bidyarth - May 29, 2021 7251

eLearning as technology becomes more affordable in higher education but having a big barrier in the cost of developing its resources. Deep learning using artificial intelligence continues to become more and more popular and having impacts on many areas of eLearning. It offers online learners of the future intuitive algorithms and automated delivery of eLearning content through modern LMS platforms. This paper aims to survey various applications of deep learning approaches for developing the resources of the eLearning platform, in which predictions, algorithms, and analytics come together to create more personalized future eLearning experiences. In addition, deep learning models for developing the contents of the eLearning platform, deep learning framework that enable deep learning systems into eLearning and its development, benefits & future trends of deep learning in eLearning, the relevant deep learning-based artificial intelligence tools, and a platform enabling the developer and learners to quickly reuse resources are clearly summarized. Thus, deep learning has evolved into developing ways to re-purpose existing resources that can mitigate the expense of content development of future eLearning. It is natural to wonder where you might get AI tools to avoid the time and expense of developing your own. Don't worry about the advert of AIaaS or "AI as a Service" even small education or learning & development professionals can purchase the license of AI tools and components. However, such types of tools cannot be useful for every e-learning ecosystem but may offer some enticing benefits such as adding standard AI tasks (logic, decision making) to your toolbox. Here are some of the AIaaS tools and platforms offered by famous tech giants most of which are cloud-based.

Microsoft Azure

Cloud-based AI services that can be used to build and manage AI applications like image recognition or bot-base d apps

IBM's Watson

Cloud-based AI services that can be integrated into your applications; to store and manage your own data

Google's Tensor Flow

An end-to-end open-source machine learning platform

Amazon Web Services

Offers a wide range of products and services on Amazon's cloud

There are other AIaaS platforms such as DataRobot, Petuum, and H2O which shows that the field is expanding. AI will probably not make human workers obsolete, at least not for a long time. To put some of your fears to bed: the robots are probably not coming for your jobs, at least not yet. Given how artificial intelligence has been portrayed in the media, in particular in some of our favorite sci-fi movies, it's clear that the advent of this technology has created fear that AI will one day make human beings obsolete in the workforce. After all, as technology has advanced, many tasks that were once executed by human hands have become automated. It's only natural to fear that the leap toward creating intelligent computers could herald the beginning of the end of work as we know it. But, I don't think there is any reason to be so fatalistic. A recent paper published by the MIT Task Force on the Work of the Future entitled "Artificial Intelligence And The Future of Work," looked closely at developments in AI and their relation to the world of work. The paper paints a more optimistic picture.

Rather than promoting the obsolescence of human labor, the paper predicts that AI will continue to drive massive innovation that will fuel many existing industries and could have the potential to create many new sectors for growth, ultimately leading to the creation of more jobs. While AI has made major strides toward replicating the efficacy of human intelligence in executing certain tasks, there are still major limitations. In particular, AI programs are typically only capable of "specialized" intelligence, meaning they can solve only one problem, and execute only one task at a time. Often, they can be rigid, and unable to respond to any changes in input, or perform any "thinking" outside of their prescribed programming. Humans, however, possess "generalized intelligence," with the kind of problem-solving, abstract thinking, and critical judgment that will continue to be important in business. Human judgment will be relevant, if not in every task, then certainly throughout every level across all sectors. There are many other factors that could limit runaway advancement in AI. AI often requires "learning" which can involve massive amounts of data, calling into question the availability of the right kind of data, and highlighting the need for categorization and issues of privacy and security around such data. There is also the limitation of computation and processing power. The cost of electricity alone to power one supercharged language model AI was estimated at \$4.6 million. Another important limitation of note is that data can itself carry bias, and be reflective of societal inequities or the implicit biases of the designers who create and input the data. If there is bias in the data that is inputted into an AI, this bias is likely to carry over to the results generated by the AI.

There has even been a bill introduced into Congress entitled the Algorithmic Accountability Act with the goal of forcing the Federal Trade Commission to investigate the use of any new AI technology for the potential to perpetuate bias. Based on these factors and many others, the MIT CCI paper argues that we are a long way from reaching a point in which AI is comparable to human intelligence, and could theoretically replace human workers entirely. Provided there is an investment at all levels, from education to the private sector and governmental organizations—anywhere that focuses on training and upskilling workers—AI has the potential to ultimately create more jobs, not less. The question should then become not "humans or computers" but "humans and computers" involved in complex systems that advance industry and prosperity. This paper is a fascinating read for anyone hoping to dive deeper into AI and the many potential directions in which it may lead. AI is becoming standard in all businesses, not just in the world of tech. A couple of times recently, AI has come up in conversation with a client or an associate, and I'm noticing a fallacy in how people are thinking about it. There seems to be a sense for many that it is a phenomenon that is only likely to have big impacts in the tech world. In case you hadn't noticed, the tech world is the world these days. Don't ever forget when economist Paul Krugman said in 1998 that "By 2005 or so, it will become clear that the Internet's impact on the economy has been no greater than the fax machine's." You definitely don't want to be behind the curve when it comes to AI. In fact, 90% of leading businesses already have ongoing investments in AI technologies. More than half of businesses that have implemented some manner of AI-driven technology report experiencing greater productivity. AI is likely to have a strong impact on certain sectors in particular:

#### Medical:

The potential benefits of utilizing AI in the field of medicine are already being explored. The medical industry has a robust amount of data, which can be utilized to create predictive models related to healthcare. Additionally, AI has shown to be more effective than physicians in certain diagnostic contexts.

#### Automotive:

We're already seeing how AI is impacting the world of transportation and automobiles with the advent of autonomous vehicles and autonomous navigation. AI will also have a major impact on manufacturing, including within the automotive sector.

#### Cybersecurity:

Cybersecurity is front of mind for many business leaders, especially considering the spike in cybersecurity breaches throughout 2020. Attacks rose 600% during the pandemic as hackers capitalized on people working from home, on less secure technological systems, and Wi-Fi networks. AI and machine learning will be critical tools in identifying and predicting threats in cybersecurity. AI will also be a crucial asset for security in the world of finance, given that it can process large amounts of data to predict and catch instances of fraud.

#### E-Commerce:

AI will play a pivotal role in e-commerce in the future, in every sector of the industry from user experience to marketing to fulfillment and distribution. We can expect that moving forward, AI will continue to drive e-commerce, including through the use of chat-bots, shopper personalization, image-based targeting advertising, and warehouse and inventory automation.

#### AI can have a big impact on the job search

If you are moving forward with the hope that a hiring manager may give you the benefit of the doubt on a small misstep within the application, you might be in for a rude awakening. AI already plays a major role in the hiring process, so much so that up to 75% of resumes are rejected by an automated applicant tracking system, or ATS before they even reach a human being. In the past, recruiters have had to devote considerable time to poring over resumes to look for relevant candidates. Data from LinkedIn shows that recruiters can spend up to 23 hours looking over resumes for one successful hire.

Increasingly, however, resume scanning is being done by AI-powered programs. In 2018, 67% of hiring managers stated that AI was making their jobs easier. Despite the increasing prevalence of automation and algorithms in the hiring process, many have been critical of the use of certain types of AI by hiring managers, based on the charge that it can perpetuate and even create more bias in hiring. One particular example is illustrated by HireVue, a startup whose initial services included technology that aimed to use facial recognition software and psychology to determine the potential effectiveness of a candidate in a certain role. The Electronic Privacy Information Center filed a lawsuit with the Federal Trade Commission alleging that this software had the potential to perpetuate bias and prejudice. HireVue discontinued the use of facial recognition software in early 2021, and now uses audio analysis and natural language processing. It's clear that the use of certain types of AI in the hiring process will likely be controversial as new technology develops. However, if potential employers are usin

g AI to process your application, there is no reason that you cannot be utilizing similar technology to your advantage.

Jobscan is an excellent resource that provides similar resume scanning to what would be used by a hiring manager. By comparing your resume to a job description, Jobscan will give you information on how to tweak your resume so that it is a good match for a certain position, with the goal of "beating" an applicant tracking system (ATS).).

Jobseer is a browser add-on, and another great AI-based tool for those on the job market. Based on a scan of your resume, as well as keywords and skills related to your desired jobs, Jobseer will help match you with the job listings that best fit your experience. For each listing, you get a rating based on how well you are aligned with the particular posting, as well as recommendations of skills to add to better position your resume and experience.

Rezi: Now, as a disclaimer, I would never encourage you to turn your resume writing over to a bot. But Rezi is an awesome AI-based resume builder that includes templates to help you design a resume that is sure to check the boxes when it comes to applicant tracking systems. This is a great jumping-off point to kickstart a new resume. Another great way to use this type of tool is to generate a new resume and compare it to your current resume to see how it stacks up, and identify some areas for improvement. AI is also a great place to focus your energy if you are looking to upskill in your career, or make your professional profile more competitive in the job market, especially when you consider that AI will have such far-reaching impacts across many industries. AI and machine learning are at the top of many lists of the most important skills in today's job market. Jobs requesting AI or machine-learning skills are expected to increase by 71% in the next five years. If you'd like to expand your knowledge base in this arena, consider some of the great free online course offerings that focus on AI skills. If you are tech-savvy, it would be wise to dive deep and learn as much as you can about interacting in the AI space. If your skills lie elsewhere, it is important to recognize that AI will have a big impact, and to the extent of your abilities, you should try to understand the fundamentals of how it functions in different sectors. AI is definitely here to stay, whether we like it or not. Personally, I don't think we have anything to be afraid of. The best way to move forward is to be aware of and adapt to the new technology around us, AI included. This article was updated on April 16, 2021, to reflect changes in HireVue's assessment tools.

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# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("47.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
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By Ajay Bidyarth - May 29, 2021 7132

Before the internet, information was in some ways restricted and more centralized. The only mediums of information were books, newspapers, and word of mouth, etc. But now with the advent of the internet and improvements to computer technology (Moore's Law), information and data skyrocketed, and it has become this open-system, where information can be distributed to people without any kind of limits.

#### SECURING YOUR DEVICES AND NETWORKS

##### Encrypt your data

Various publicly available tools have taken the rocket science out of encrypting (and decrypting) email and files. Data encryption isn't just for technology geeks; modern tools make it possible for anyone to encrypt emails and other information. "Encryption used to be the sole province of geeks and mathematicians, but a lot has changed in recent years. In particular, various publicly available tools have taken the rocket science out of encrypting (and decrypting) email and files. GPG for Mail, for example, is an open-source plug-in for the Apple Mail program that makes it easy to encrypt, decrypt, sign and verify emails using the OpenPGP standard. And for protecting files, newer versions of Apple's OS X operating system come with FileVault, a program that encrypts the hard drive of a computer. Those running Microsoft Windows have a similar program. This software will scramble your data, but won't protect you from government authorities demanding your encryption key under the Regulation of Investigatory Powers Act (2000), which is why some aficionados recommend TrueCrypt, a program with some very interesting facilities, which might have been useful to David Miranda," explains John Naughton in an article for The Guardian.

##### Backup your data

One of the most basic, yet often overlooked, data protection tips is backing up your data. Basically, this creates a duplicate copy of your data so that if a device is lost, stolen, or compromised, you don't also lose your important information. As the U.S. Chamber of Commerce and insurance company Nationwide points out, "According to Nationwide, 68% of small businesses don't have a disaster recovery plan. The problem with this is the longer it takes you to restore your data, the more money you'll lose. Gartner found that this downtime can cost companies as much as \$300,000 an hour."

##### The cloud provides a viable backup option

While you should use sound security practices when you're making use of the cloud, it can provide an ideal solution for backing up your data. Since data is not stored on a local device, it's easily accessible even when your hardware becomes compromised. "Cloud storage, where data is kept offsite by a provider, is a guarantee of adequate disaster recovery," according to this post on TechRadar. Twitter: @techradar

##### Anti-malware protection is a must.

Scammers are sneaky: sometimes malware is cleverly disguised as an email from a friend or a useful website. Malware is a serious issue plaguing many computer users, and it's known for cropping up in inconspicuous places, unbeknownst to users. Anti-malware protection is essential for laying a foundation of security for your devices. "Malware (short for malicious software) is software designed to infiltrate or damage a computer without your consent. Malware includes computer viruses, worms, trojan horses, spyware, scareware, and more. It can be present on websites and emails or hidden in downloadable files, photos, videos, freeware, or shareware. (However, it should be noted that most websites, shareware, or freeware applications do not come with malware.) The best way to avoid getting infected is to run a good anti-virus protection program, do periodic scans for spyware, avoid clicking on suspicious email links or websites. But scammers are sneaky: sometimes malware is cleverly disguised as an email from a friend or a useful website. Even the most cautious of web-surfers will likely pick up an infection at some point.," explains Clark Howard. Twitter: @ClarkHoward

##### Fig: Protect your Computer from Viruses

##### Make your old computers' hard drives unreadable.

Much information can be gleaned through old computing devices, but you can protect your personal data by making hard drives unreadable before disposing of them. "Make old computers' hard drives unreadable. After you back up your data and transfer the files elsewhere, you should sanitize by disk shredding, magnetically cleaning the disk, or using software to wipe the disk clean. Destroy old computer disks and backup tapes," according to the Florida Office of the Attorney General. Twitter: @AGPamBondi

##### Install operating system updates.

Operating system updates are a gigantic pain for users; it's the honest truth. But they're a necessary evil, as these updates contain critical security patches that will protect your computer from recently discovered threats. Failing to install these updates means your computer is at risk. "No matter which operating system you use, it's important that you update it regularly. Windows operating systems are typically updated at least monthly, typically on so-called 'Patch Tuesday.' Other operating systems may not be updated quite as frequently or on a regular schedule. It's best to set your operating system to update automatically. The method for doing so will vary depending upon your particular operating system," says PrivacyRights.org. Twitter: @PrivacyToday

##### Automate your software updates.

Many software programs will automatically connect and update to defend against known risks.

In order to ensure that you're downloading the latest security updates from operating systems and other software, enable automatic updates. "Many software programs will automatically connect and update to defend against known risks. Turn on automatic updates if that's an available option," suggests StaySafeOnline.org. Twitter: @StaySafeOnline

##### Secure your wireless network at your home or business.

A valuable tip for both small business owners and individuals or families, it's always recommended to secure your wireless network with a password. This prevents unauthorized individuals within proximity to hijack your wireless network. Even if they're merely attempting to get free Wi-Fi access, you don't want to inadvertently share private information with other people who are using your network without permission. "If you have a Wi-Fi network for your workplace, make sure it is secure, encrypted, and hidden. To hide your Wi-Fi network, set up your wireless access point or router so it does not broadcast the network name, known as the Service Set Identifier (SSID). Password protect access to the router," says FCC.gov in an article offering data protection tips for small businesses. Twitter: @FCC

##### Turn off your computer.

When you're finished using your computer or laptop, power it off. Leaving computing devices on, and most often, connected to the Internet, opens the door for rogue attacks. "Leaving your computer connected to the Internet when it's not in use gives scammers 24/7 access to install malware and commit cybercrimes. To be safe, turn off your computer when it's not in use," suggests CSID, a division of Experian. Twitter: @ExperianPS\_NA

##### Fig: To Avoid from Hacking turn off your Computer

##### Use a firewall.

Firewalls assist in blocking dangerous programs, viruses, or spyware before they infiltrate your system."Firewalls assist in blocking dangerous programs, viruses, or spyware before they infiltrate your system. Various soft

ware companies offer firewall protection, but hardware-based firewalls, like those frequently built into network routers, provide a better level of security," says Geek Squad. Twitter: @GeekSquad

Practice the Principle of Least Privilege (PoLP).

Indiana University Information Technology recommends following the Principle of Least Privilege (PoLP): "Do not log into a computer with administrator rights unless you must do so to perform specific tasks. Running your computer as an administrator (or as a Power User in Windows) leaves your computer vulnerable to security risks and exploits. Simply visiting an unfamiliar Internet site with these high-privilege accounts can cause extreme damage to your computer, such as reformatting your hard drive, deleting all your files, and creating a new user account with administrative access. When you do need to perform tasks as an administrator, always follow security procedures." Twitter: @IndianaUniv

Use "passphrases" rather than "passwords."

What's the difference? "...we recommend you use passphrases—a series of random words or a sentence. The more characters your passphrase has, the stronger it is. The advantage is these are much easier to remember and type, but still hard for cyber attackers to hack." explains SANS. Twitter: @SANSAwareness

Encrypt data on your USB drives and SIM cards.

Encrypt your SIM card in case your phone is ever stolen, or take it out if you are selling your old cell phone. Encrypting your data on your removable storage devices can make it more difficult (albeit not impossible) for criminals to interpret your personal data should your device become lost or stolen. USB drives and SIM cards are excellent examples of removable storage devices that can simply be plugged into another device, enabling the user to access all the data stored on it. Unless, of course, it's encrypted. "Your USB drive could easily be stolen and put into another computer, where they can steal all of your files and even install malware or viruses onto your flash drive that will infect any computer it is plugged in to. Encrypt your SIM card in case your phone is ever stolen, or take it out if you are selling your old cell phone," according to Mike Juba in an article on Business2Community. Twitter: @EZSolutionCorp

Don't store passwords with your laptop or mobile device.

A Post-It note stuck to the outside of your laptop or tablet is "akin to leaving your keys in your car," says The Ohio State University's Office of the Chief Information Officer. Likewise, you shouldn't leave your laptop in your car. It's a magnet for identity thieves. Twitter: @OhioState

Fig: Media Sharing

Disable file and media sharing if you don't need it.

If you don't really need your files to be visible to other machines, disable file and media sharing completely. If you have a home wireless network with multiple devices connected, you might find it convenient to share files between machines. However, there's no reason to make files publicly available if it's not necessary. "Make sure that you share some of your folders only on the home network. If you don't really need your files to be visible to other machines, disable file and media sharing completely," says Kaspersky. Twitter: @kaspersky

Create encrypted volumes for portable, private data files.

HowToGeek offers a series of articles with tips, tricks, and tools for encrypting files or sets of files using various programs and tools. This article covers a method for creating an encrypted volume to easily transport private, sensitive data for access on multiple computers. Twitter: @howtogeeks

Overwrite deleted files.

Deleting your information on a computing device rarely means it's truly deleted permanently. Often, this data still exists on disk and can be recovered by someone who knows what they're doing (such as, say, a savvy criminal determined to find your personal information). The only way to really ensure that your old data is gone forever is to overwrite it. Luckily, there are tools to streamline this process. PCWorld covers a tool and process for overwriting old data on Windows operating systems. Twitter: @pcworld

Don't forget to delete old files from cloud backups.

If you back up your files to the cloud, remember that even though you delete them on your computer or mobile device, they're still stored in your cloud account. If you're diligent about backing up your data and use a secure cloud storage service to do so, you're headed in the right direction. That said, cloud backups, and any data backups really, create an added step when it comes to deleting old information. Don't forget to delete files from your backup services in addition to those you remove (or overwrite) on your local devices. "If you back up your files to the cloud, remember that even though you delete them on your computer or mobile device, they're still stored in your cloud account. To completely delete the file, you'll also need to remove it from your backup cloud account," says re/code. Twitter: @Recode

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By Ajay Bidyarthi - May 29, 2021 7224

We all hear day in and day out that we amidst a technological revolution. But do we know what this really means?

Before we understand how its going to impact us, let us first discuss what these terms really mean. A technological revolution simply means that we are in a period where better and newer technologies replace the others to get the job done faster and better. We are in an era with rapid innovations where machines are being compared to humans.

Fig: Technological Revolution

So, then what is Machine Learning?

Machine Learning is basically the application of artificial intelligence into electronic systems to enable them to learn and enhance themselves without being programmed by humans. It is the evolution and development of computer programs that can access data and then use it to advance themselves. Whether you know it or not, you use machine learning-powered applications daily.

Now, what is Artificial intelligence?

At its simplest form, artificial intelligence is a field, which combines computer science and robust datasets, to enable problem-solving.

In simple words, Artificial Intelligence is the technology that facilitates these machines to perform human like behaviour.

Just like every other industry, machine learning is playing its role in the finance and banking industry too. In most cases where a human would perform the same task by performing the same calculations or following the same process can be taught to the machine which can now perform it by itself.

Let us discuss a few examples of the applications that we might have come in our day to day running which are a result of machine learning in this industry:

Portfolio ManagementRisk UnderwritingAlgorithmic TradingFraud DetectionProcess AutomationCustomer onboardingCustomer churnDecision MakingProcess Automation

Portfolio Management

In earlier days, an investor would need to consult a financial advisor to understand his/her risk appetite and advise accordingly. Today, using machine learning algorithms there exists the concept of a "Robo-Advisor" that requires any user to give certain inputs about their financial status and goals and calculates their risk tolerance and constructs and idle portfolio allocation for them. Young users today find this extremely useful rather than physically visiting an advisor and paying a fee for doing so.

Risk Underwriting

Underwriting is one of the core functions for most financial institutions especially banks and insurance companies where they are required to underwrite the risk of the customers before loaning out money or insurance policies. These underwriting activities are based on trends and thumb rules industrywide. The same has been introduced through machine learning which is able to underwrite risks today on a larger and more accurate scale.

Algorithmic Trading

Machine learning is a mathematical model that tracks market information, analyses massive data sources and study market conditions simultaneously to detect patterns which can be used for trading. This is humanly impossible to do in a fraction of time. Algorithmic systems can make millions of trades daily, often known as "high-frequency trading". It is highly believed that deep learning is playing its role in calibrating real-time trading decisions.

Fraud Detection

With the increase in use and dependency on computers for financial transactions came the data security risk. There is an ample amount of valuable data stored online available to create potential risk. Machine learning thus helped in fraud detection by detecting anomalies in transactions and flagging them for scrutiny based on the risk factors defined by the institutions. Fraud identification in insurance claims, credit card payments, identity theft, account theft, are all areas in fraud detection that machine learning can help in.

Process Automation

Process automation is one of the most common applications of machine learning in finance. The technology has helped in replacing manual work, automate repetitive tasks to avoid redundancy, and as a result, increase productivity. Machine learning has benefitted these organizations to optimize costs, improve customer experiences, and

scale up their services. Some examples of financial and banking firms using process automation are the use of chatbots, automated calls, paperwork automation, and gamified employee training.

#### Customer onboarding

In this highly competitive industry, customer acquisition and the customer onboarding process is highly relevant in building a good customer relationship. At any stage, during the onboarding, a slight inconvenience or delay can act as a barrier. Machine learning-enabled complete automation in this process for these financial and banking institutions. Today, from opening an account, filing for any application can be completed within a few minutes with utmost ease. With AI, customers' behavioral patterns have been studied to improvise and make the whole process efficient and user-friendly.

#### Customer churn

With the multitude of offerings and availability of a plethora of options, customer stickiness is a big problem faced by financial firms. Customer churn forecasting is one of the best big data use cases. It helps in detecting customers who cancel their subscription and analyses the same to tailor products as per customer needs. Video streaming application, Netflix's subscribers worldwide has continued to grow to reach 167 million through using machine learning analytics on their customer database.

#### Decision Making

Financial and banking institutions function on facilitating investments made by their customers. Organizations are constantly in search of customers from whom they can get more revenue. This is now possible through performing machine learning analysis on both structured and unstructured data which helps them make more informed decisions. It also analyses data from the website and mobile application to construct effective marketing campaigns for the targeted customers.

#### Future of Machine Learning in Finance

Financial monitoring, security analysis, prevention of money laundering, network security, investment predictions, personalization of customer service everything comes under the realm of the applications of machine learning in the financial and banking industry. Yet, this is just the tip of the iceberg, there is a lot more that is going to change in the future. It is now visibly imperative that while AI is beginning to create a wave of transformation across these industries and adapting to these changes is important for one's survival. With smart technology applied everywhere, all financial firms are bound to turn into FinTech's to stay relevant to the "silver tech generation" consisting of millennials and the GenZs.

#### Final thoughts

The financial services industry has entered the space of artificial intelligence and machine learning, and the pace is not surprising knowing the positive changes it has brought. Machine learning has the most use cases in finance than any other industry because of the available computer power and new machine learning tools. The greatest applications include simplifying customer engagement and accurate sales forecasting. It is only making this industry better and more efficient with each new adaptation. Machine learning algorithms have the capability to deal with a lot more than human capacity along with eliminating human error. As even the algorithms are constantly learning and innovating, they can serve as a bridge to a completely flawless automated financial system in the future. Nonetheless, the challenges of high cost and lack of resources that come along play a significant role in how early these firms can adopt these technologies. But even then, the future seems bright as the industry has enough adopters and prospects ready to explore.

Blackcoffer Insights 28: Tanisha Gupta, XLRI

TAGS: AI, Bank, deep learning, finance, machine learning, robotics

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It's the year 2060. An automaton in a Research Laboratory says to a Scientist, "Warning! Error Occurred Reformating Hard Disk Now!" The scientist panics. Automaton says again, "Ha! Ha! Just Kidding!".

Funny Right. Before some of you say that this joke isn't realistic, "How can an Automaton tell you a joke?" But what if I tell you in 2017, "Sofia" the robot made a joke on the show Good Morning Britain! Who thought computers could tell us a joke? Hard to believe? Well, the idea of giving computers human-enjoy thinking has now become a reality. Thanks to the technological advancement in AI in the last decade.

Before diving deep into how AI can impact the future of work, let's begin with the simple question: what's AI? Artificial Intelligence provides machines the power to think from data. The machine uses the patterns and trends found in data and makes its decision, but cannot create thought beyond these patterns and trends.

#### Fig: Impact of robots on employments

With the rise of AI, humans are divided into one question. Are machines human's friend or foe? Tech executives and politicians on conference stages, campaign rallies, and even science fiction Hollywood movies like Carbon Black, Westworld, Minority Report, and Ex Machina have given their take on this question. Some believe AI will help us solve problems while others believe that the rise of AI will result in destruction and maybe the end of the world, we all know.

Stephen Hawking made it no secret of his concern about the rise of superhuman AI that eventually would escape earth to a new planet. No, this isn't a plot of Black Mirror. Right now, Superhumans may not be a reality, but AI is.

"Homo Deus", the emergence of the new Digital God using AI. God must also worry, as AI might take his job.

Here's some Career Advice, have you thought about being a Robot? The fear that AI would automate all jobs in the future eventually leaving all humans jobless has been daunting for many workers today. Statistics show that nearly 37% of workers worry about losing their jobs to robots. While another thought that many people believe is that though the rise of AI will result in automating most of the jobs in the future, however, it also will create millions of new job opportunities.

AI is already replacing most manual and repetitive tasks. For example, buying a metro ticket or a movie ticket is now almost a human-less interaction. Each year the number of industrial robot jobs increases by 14 %. At this rate, it's predicted that the 20 million jobs in the manufacturing industry will be replaced by robots due to automation.

The coronavirus pandemic and recession have boosted the demand for automation. The Robotic Process Automation (RPA) Software industry has experienced an increase of 19.53% in the year 2021. Coronavirus pandemic has increased interest in technology that reduces human contact as minimal for making workplaces safe.

Our workplaces will look much different in the next five to ten years. AI will help humans in simplifying repetitive processes. The two most important catalysts for the future of work are the two D's- Digitization and Datafication. Digitalization is converting data to digital formats (computer-readable). For example, text to Html, analog video to YouTube video. Digitization helps in increasing data exponentially. Datafication is quantifying human life to data and improving the data-driven business model. By 2025, it is forecasted that the digital transformation space will build in a \$3,294 billion industry!

One thing is clear, no data, no future of work. What we find is that the future of data and the future of work will go hand in hand. The total volume of data in the datasphere that is created, captured, copied, and consumed in the world is predicted to reach 175 zettabytes by 2025. To give you a much better picture for understanding, if we represent the digital universe as stacks of tablets, there would be 27.25 stacks from earth to the moon.

It's time to prepare for the data-dominated future as Industry 4.0/Fourth Industrial Revolution has begun. So, let's see how artificial intelligence will affect the following fields:

**Human Resource:** Nowadays, recruiters use AI-powered tools for hiring workers. Using these tools, recruiters get insights into a candidate's skills, personality and even check whether the candidate is fit for the organization. For example, the company AllyO first identifies high-potential candidates through assessment and smart screening, and then automatically schedules interviews using AI. HR departments at large companies receive hundreds of resumes for a job opening. Entry-level roles focusing on screening and scheduling will be automated. AI will automate specific HR jobs, not HR roles. A Deloitte study found that AI has already eliminated 800,000 low-skilled jobs in the UK, but 3.5 million new jobs were also created. Roles that focus on complex decisions like resolving disputes within a department will continue to be a very human endeavor.

**Finance and Accounting:** In 2015, a report from Accenture named "Finance 2020: death by digital" predicted that 40 percent of transactional accounting work would be automated by 2020. Has technology replaced the human factor? Well, AI has created new jobs involving managing the AI system and using the information to create insights. For example, accounting software has already automated bookkeeping tasks that used to be done by humans, but that's only opened the door for former bookkeepers to learn skills needed to run and manage the software for employers and clients. Advisors are another crucial role of the accounting and finance team. Using the information gained from transactions in books, the team creates insights to improve business strategy. Owing to automation, the team spends more time analyzing numbers.

**Marketing and Sales:** Marketing automation has helped companies strategize the proper utilization of the company's resources, managing time, and achieving budget targets. Marketing automation has helped to draw conclusions at a scale no marketer ever would. In this process, marketers and machines both excel in different parts. Marketers using AI tools drive more conversions in less time. Human Intelligence with technology can help identify the right customers to talk to and at the right time. Modern Marketers understand the insights from any marketing campaign and create it into effective messaging.

**Engineering:** Technology is changing in a blink of an eye. The technologies used five years ago in the industry have become obsolete today. Engineers will have to keep up with the technological advancements and keep upgradi

ng their skills to stay relevant in the industry. Learning to work alongside machines and designing work such that interaction better humans and machines are better are going to be important skills for engineers in the future.

Fig: Robots takes place the job role of man.

In the 18th and 19th centuries, the rise of the industrial revolution centuries led to millions of people losing their jobs because of scientific advancements. But that also ended in creating millions of other jobs. Statisticians have said, when automation destroys jobs, people find new ones. Thus, AI holds a more optimistic picture for the future.

In the future, AI is not going to replace humans, rather make jobs more humane. AI will disrupt millions of middle and entry-level jobs in the next few years but will also create millions of additional jobs and help to boost economies.

Blackcoffer Insights 28: DAVANG SIKAND, Manipal University Jaipur

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By Ajay Bidyarth - May 29, 2021 6973

### Abstract

The way work is being done now is destined to undergo massive transformational changes which will impact humans and their ways of working dramatically. With the development of the new machine programs, A.I. is all set to take over the humans in their workplace as no other did. Now we are not only in competition with other beings but with robots too. And robots will overcome us in our fields of work.

At present we are being surrounded by A.I. from dusk till dawn, from facial recognition present in our mobile application to dating websites/applications which uses decision making as their algorithms and learn from the pa

st data as well. It is believed that A.I. has grown over 270% over the last years.

First, let us know what A.I. is and all the fuss going on about it?A.I. as defined by the internet is simply 'simulation of human intelligence in machines that are programmed to think like humans and mimic their actions'. This translates to, it can work as a human being just at fast speed and with 100% accuracy.In my definition I would define A.I. as the god form of human beings.

Now the question that arises is, what does A.I. entails for the future?

A.I. is fancy enough to continue existing in our minds all the time, but it does come with certain limitations and threats which is a cause for a peaceful sleep for most of the workers. With its introduction to different areas of the workplace, it is clear that half of the human jobs would be taken up by A.I. and then there would a rise a need for more jobs for humans in new upcoming AI-based ventures in different industries. Thereby giving us our fair share back to us.

In a survey, it was found that some believed that AI will be devastating for humans and while some professionals and tech-savvy people believed that inculcating AI technology into business and our daily lives would be a remarkable step as it will lead to the flourishing of business in the future and give them a competitive edge over their rivals.

People believed that when these advanced technologies would come together to work with humans, they will produce a smarter strategic decision with productive collaborative practices. More modern technology prevailing in the organization will lead to stress reduction and produce more satisfying results thereby making the organization more efficient.

The Organizations who are in use of the AI technology responds by saying that their managers are more comfortable using A.I. and are accustomed to it and the organizations are now looking forward to having integration of higher-end technology systems, as it is believed that new technology will result in more productivity thereby making more profits in the long run.

Many jobs today require AI and humans working in collaboration, which creates a positive signal that in the future to humans would be working closely with the technology. Beyond just training and developing these machines, humans would be working in close vicinity with them and making decisions on how to act on the result that is given by the machine.

It can be said that both the AI advanced technology and human can't remain in the workforce without each other, as the technology will produce accurate and top-notch results but it requires someone to make delivery.e.g., in a firm, an AI-based system produces results based on historical data but there is a need for someone to analyze and communicate and present this data to the respective stakeholders whether inside or outside of the organization.

Various uses of artificial intelligence technology in day-to-day functions in regards to interactions with humans are:

ChatbotsEmail curationA.I. powered advertisingAutomated image recognitionSelf-sufficient drivingVoice activation and much more.

Here in this figure A represents 'Artificial Intelligence' and B represents 'Humans'

Artificial intelligence as we know works on algorithms, neural networks, and deep learning which all are analytical tools that help AI in taking analytical decisions based on the data provided.

Whereas, humans on the other hand take higher-level decisions based on 'Intuition' sometimes, which refers to the gut feeling that generates in humans concerning any situation or challenge.

AI alone can't work to handle critical situations on its own as it needs humans for it to reciprocate them and share the information with stakeholders, and humans alone can't anticipate much on the accurate and fast-paced analytical solutions to the problems persisting in place of the situation.

The strength of humans and AI working in synergy can be surprisingly beneficial and advantageous to organizations.

#### ARTIFICIAL INTELLIGENCE AND JOBS

It is believed that machines in the future would be eating up our traditional jobs. But the reality seems to be turning otherwise.

The future trend shows that in future the AI-powered technology would take up jobs that were being done by humans but in return would produce more jobs that would require human interference with them. As and when the newer technology is approaching more and more countries are now proceeding towards GIG Economies, and so in the future, we can witness an increase in freelance jobs and the permanent labor market norms could reduce drastically. Some of the jobs today will be replaced by AI which is in the transportation or retail commerce sector that can be 100% automated in the future years. There is an 'Amazon Go' store that uses this technology which goes by the name 'Just walk out technology' wherein there is no need for any human-induced workforce and all the operations are carried out by AI-powered technologies, which is indeed a breakthrough technology in today's world.

Rather than eating up our jobs AI in return will be creating more jobs in the future by creating massive innovations thereby fueling up many new industries and thereby giving us our fair share of jobs back.

There will be a lot of demand placed on the upcoming young workforce which is also categorized as 'Gen Z'. They are expected to know more about technology and would be high in demand. These young generations are required to learn new skills which are needed to survive in the dynamic changing environment, and as most of the activities that are carried out by workers will be automated, there will be demand for people working in the back office and maintaining and developing the technology to its best versions.

#### ARTIFICIAL INTELLIGENCE AND ITS CONSTRAINTS

AI powered technology has its limitations which makes it a rigid system to hold on to and also which makes it a costly affair at the initial stage.

It was predicted that the cost of electricity to power a supercharged AI model was around \$4.6 million. So, this super-powered AI can be purchased only by big fortune firms and thereby creating more value to their net worth.

One of the major limitations of AI is that it can contain biased data as the scientists who put in the data can create biasedness and so the resultant output of the same would have a biased report.

These machines as do not have neuroscience-based technology in them yet which enables them to carry human emotions to understand complex situations and a creative way out of that, they tend to have a lack of out of box thinking which in the case is rigid in themselves as they are programmed to work on a single task and they cannot perform more than a single task at the same time.

It is also believed that there exists no creativity among the computer, no matter it is fast-paced, but they are not intelligent.

#### PREPARING FOR THE FUTURE

##### Business and organization

Businesses and organizations need to understand and anticipate the opportunities that the future holds for them and they need to start training their employees based on today's dynamic changing technology. While it's still unclear what does the future holds for us, but the anticipation of it could benefit us in several ways.

As we are unclear about what the future looks like, we need to think in probable terms how it could turn out to be and then employ specific training programs for the employees of the organization.The training the employees are needed to be done on a continuous and lifetime basis which means that education won't be only limited to PG degrees but will be now a lifetime process of learning.

As the Covid-19 changed the scenario of the work patterns around the world, we now need to think strategically about the working dynamics of the future and how does it look like compared to the pre-covid and post-covid sce

nario.

Employees will be playing a major role in transforming the organizations and work practices in the upcoming future, so organizations need to select and recruit the best candidates among the pool and then provide them with best practices of the new machines and make proficient in their area of work. Policies need to be developed to hire the best people and then retaining the talent in the organization.

There needs to be a continuous scanning of the environment by the organizations to comprehend any new trends and assess them, not all trends will be beneficial for organizations, they must be aware of the prospects and plan for the future systematically and consistently.

#### CONCLUSION

There lies a possibility in future certain years from now, we could have machines who will have general human intelligence who would be able to answer deep meaningful questions asking 'Why are the curtains blue?', would be able to clean cars, play politics and tell jokes to us, and by using deep and machine learning programs their level of intelligence would be beyond mathematical calculations to us. That's how good machines will be in the future, but to make ourselves competitive with machines, we would need to train ourselves for the impending ambiguous future ahead of us.

Humans and machines need to work in synergy to get beneficial and satisfying results for both parties.

Machines are indeed going take away many of our jobs, but let me make you sleep peacefully tonight, the machines aren't arriving until we're retired.

Blackcoffer Insights 28: Utkarsh Mahatma, Ahmedabad university

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By Ajay Bidyarthi  
May 28, 2021  
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## Abstract

Artificial intelligence and employment are the burning issues nowadays workers need clarity on as we head into the longer term. This article focuses on the various impact of AI on our jobs and explains the benefits of AI in our workplace. That right there must have hit a nerve. However, everything is about to change because this article highlights some of the reasons we should not fear AI.

### What is AI?

AI is the abbreviation of Artificial Intelligence. Artificial intelligence is often defined as a set of various technologies which will be brought together to permit machines to act with what appears to be human-like levels of intelligence. This includes learning rules required to make certain decisions and reasoning to arrive at certain conclusions, learning from past experiences, and self-correction.

AI is of two types.

Narrow/Weak AI – AI solution designed and trained for a specific task. Strong AI – An AI solution whose intelligence matches that of a human brain across multiple & differentiated tasks.

### Key Moments in the AI Journey

1940

Expectations that machines could match humans in terms of general intelligence. By that, we mean machines could have the capability to find out, Reason, and React.

1950

Alan Turing develops the Turing Test; a test to determine whether a machine is intelligent. However, it wasn't for another 60 years or so that any program was deemed to have passed.

1955

The first time a computer virus defeats a person's World Champion during a parlor game.

1956

John McCarthy invents the new term 'Artificial Intelligence' when he held the primary Academic Conference on the subject of AI.

1962

Arthur Samuel's machine learning checkers (draughts) program, beat a checkers master.

1980

Reinforcement Learning is introduced. This is a kind of programming that uses rewards and punishments to coach a machine to interact with its environment.

2012

A research group led by Geoffrey Hinton wins the Image Net competition – this competition requires AI to categorize about 1.2 million images into any of 10,000 different categories. The level of accuracy was adequate to that of the typical human completing an equivalent task manually.

2014

Eugene Goostman's chatbot, a bot pretending to be a 13-year-old boy, supposedly passes the Turing Test, a test which nobody has passed before! But controversy arose with this claim as:

1. Experts claim it only lasted five minutes.

2. It had been deemed biased as Eugene's mother tongue (Ukrainian) wasn't equivalent to the judge's (English), which is a plus as language is one among the few ways we will tell the difference between a person's and machine's.

2018

Alibaba's AI Model performs better than humans during a reading and comprehension test at Stanford University, scoring 82.44 against the 82.304 scored by humans!

### Concerns about AI

Artificial Intelligence (AI) is here to remain, and lots of people aren't happy. After all, it's hard to embrace something that would displace about 40 percent of human jobs within the next 15 years. In an interview for CB S's hour, Kai-Fu Lee (a Chinese AI expert) also mentioned truck drivers, chauffeurs, waiters, and chefs as a number of the professions that will be disrupted.

But if you were to ask the experts, they might unwaveringly confirm that no matter all the noise, AI is here to profit us all. Case in point, an executive briefing by the McKinsey Global Institute revealed that AI and automation are creating opportunities for the economy, society, and business.

That said, it's time to repress the widespread idea of artificial intelligence taking jobs. So, let's highlight a number of the useful developments you'll expect from this technological phenomenon.

### AI will create jobs

While the relationship between artificial intelligence and jobs is a matter of hot debate, it is still safe to say that AI will indeed offer new opportunities. According to the planet Economic Forum report, robots and AI will create as many AI jobs as they displace. This conclusion is entirely viable as it is easy to identify some of the many careers in artificial intelligence, for example, data scientists, who evaluate the decisions made by AI algorithms to eliminate any biases. Apart from that, some other AI occupations include:

Transparency analysts: people tasked with classifying the varied sorts of opacity for algorithms. Smart-system interaction modelers: experts who develop machine behavior based on employee behavior. Machine-relations managers: people that champion the greater use of algorithms that perform well. As far as the competition for jobs between humans and robots goes, worth noting is that there are jobs that AI can't replace. Roles that need leadership, empathy, and delegation are samples of the various jobs that are safe from automation.

### AI will eliminate bias and a variety of challenges at work

Automation will stir positive change in the workplace. When AI is employed during recruitment or maybe performance management, all workers are going to be evaluated in an unbiased, fact-based manner. In turn, Human Resources managers can get to consider other essential strategic undertakings that ensure balance within the workplace.

AI can help HR departments to use machine learning (ML) in discovering where issues like bias stem from and assist them to act accordingly faster. ML shines in identifying instances of bias. In turn, this may promote fairness and variety within the work setting.

### AI in the workplace will steer business-outcome strategies

The impact of AI in business is already felt, and this is often expected to continue through to the longer term. A few years from now, AI-oriented architecture is forecasted to require the lead in assisting businesses to hold out operations in additional comprehensive ways, thus shifting them from traditional data science and machine learning models. It will be necessary to maneuver to business outcomes because AI will play an important role in multiple aspects of the business. While there is no way of telling the future of artificial intelligence in business for sure, it makes sense for owners to keep up with the evolution to avoid being left behind.

### AI will boost innovation within the workplace in the longer term

The workforce of the longer term will lean more towards innovation and creativity. Businesses have spent higher a part of the previous couple of years studying AI automation and the way they will leverage it to realize results fast. With statistics showing that workers spend up to 40 percent of their hours at work performing repetit

ive tasks, every business should consider automating any functions which will be automated. Automation is not new; machines have been replacing human labor in different areas for decades. However, within the coming years, mundane daily tasks will become fully automated. Already, 39 percent of organizations were completely reliant on automation in 2018. With repetitive tasks taken care of, employees can focus their energies on high-value customer-oriented tasks and collaboration. The designs of workplaces and workflows will also change with the implementation of AI technology. More people will begin to figure more closely with machines as companies will strive to become more agile.

Companies that implement AI in their business strategy will experience dramatic improvements in their customer experiences, and their employees are going to be more motivated. Encouraging creativity rather than the performance of repetitive tasks gives workers more fulfillment in their jobs as well.

With another technology, AI will positively impact the world

With the web of things and AI working hand in hand, identifying trends and solving problems within the business world will become more convenient and also sustainable. AI, alongside other technologies, is predicted to vary the planet by impacting the way businesses run. With time, we'll be ready to combine both human and artificial brains to seek out solutions to major global problems.

It will even be easier to foresee problems with more accuracy and nip them at the bud with the help of AI. But these positive impacts can only be felt if stakeholders are transparent and mindful in their use of the technology for the greater good of everyone else.

Robotics and AI will boost productivity

According to a report by PWC, 54 percent of companies confirm that the implementation of AI-driven solutions in their companies has already improved productivity. AI and automation, even once they are implemented partially, have unlimited potential for any business. Workers' skills, attitude, training, command chain, and workflows protocols are a number of the leading productivity challenges that companies face.

Apart from increasing productivity, AI systems will help businesses to chop down on costs, improve the standard of their products or services, and make better customer profiles. As a result, companies also will get higher profits, which may be shared among stakeholders as dividends, or reinvest it back within the business. Improved productivity also means firms are going to be ready to sell their products at lower prices, thereby creating more demand among customers and more job opportunities for workers. Businesses can, therefore, use human labor to take up those jobs that have been created by AI and cannot be automated.

Final thoughts on the impact of AI on jobs

Artificial Intelligence isn't showing any signs of slowing down. Soon, it'll become another necessity of life, a bit like the web. But for now, more and more businesses are beginning to realize how invaluable AI automation and data interpretation are. Though machines will take some jobs initially, the roles created by automation will also keep soaring within the next few years.

Will, we've reached the purpose of accelerating human intelligence by artificial means? Who knows? What we all know, however, is that those that are going to be sought-after in AI and employment are individuals who have the relevant skills. There's work that not even the machines can do; so, we should make ourselves as valuable as we can be in our field and we will be irreplaceable.

Blackcoffer Insights 28: Adrita Anan, Holy Cross College, Tejgaon, Dhaka

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By Ajay Bidyarth - May 27, 2021 7027

Through AI tools like natural language processing, Alexa and google assistant has led the retail industry in its rise towards conversational commerce. As if a customer was interacting with a clerk in a retail store, conversational commerce makes it possible for users to engage with software to research, purchase, or get customer assistance with products and services across a wide range of industries. With Alexa, for example, users can ask a my Alexa-enabled device to add an item to an Amazon shopping cart, set a purchasing reminder when a product is running low, or carry out a complete purchase without having to access a shopping cart. The result is a seamless conversational experience that enables consumers to carry out transactions as quickly as it takes to speak a sentence.

Through AI tools like natural language processing, Alexa has led the retail industry in its rise towards conversational commerce. As if a customer was interacting with a clerk in a retail store, conversational commerce makes it possible for users to engage with software to research, purchase, or get customer assistance with products and services across a wide range of industries.

With the advent of personalized products and on-call delivery, customers have come to expect a new standard experience: fast, easy, accurate, and personalized. Accomplishing this without sacrificing your workday can be a challenge, since the data processing required to meet these needs is immense. Luckily, virtual agents (VAs), powered by conversational AI, can utilize this information faster and more accurately than humans, finding insights and automating communication to deliver an enriched customer experience. If you invest based on these improvements, you'll find that implementing these tools delivers a powerful competitive advantage. AI has helped in automobile, education, retail and commerce, finance and banking and healthcare.

Voice AI has powered the wheels of conversational e-commerce, which has impacted the way the customer communicates with the brand in multiple industries. Brands generally build a campaign to emotionally connect with customers, for long-term growth. With Voice, brand campaigns need to be short and ones that can lead to immediate buying. Conversational e-commerce is still in its nascent stage and it is expected to grow manifold in the coming years. The future of shopping is going to Voice AI and marketers have to get on the bandwagon fast to increase their brand value and visibility. Targeting will have to be highly personalized for success.

Despite its narrow focus, conversation AI is an extremely lucrative technology for enterprises, helping businesses more profitable. While an AI chatbot is the most popular form of conversational AI, there are still many other use cases across the enterprise.

While an exclusively chat- or voice-based shopping experience for all scenarios may never completely replace the in-person experience, conversational commerce will continue to grow as an added method of convenient and efficient communication. As users continue to become more accustomed to engaging with chatbots and voice-driven interfaces, expect more innovations in the space as brands continue to develop their unique conversation-based solutions.

Blackcoffer Insights 28: Samyak Jain

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AI experts believe it's going to be one of the main drivers of the fourth Industrial Revolution and that it has the potential to not just transform the tech sectors and going to open a new chapter of the society of the world that people try to understand themselves better rather than the outside world with AI because people who are naysayer and kind of try to drum up these doomsday scenarios are pretty irresponsible. After all, In the next, five to ten years AI is going to deliver so many improvements and the quality of our lives it is a renaissance, a golden age of machine-learning and artificial intelligence that was the realm of science fiction for the last several decades. AI is probably the most important thing humanities that have ever worked which is more profound than any work with technology, as it is important to harness the benefits and while minimizing the downside is focusing on autonomous systems like self-driving cars seen as the mother of all AI projects and has made applications like self-driving technology viable for the first time, three things happen at the same time number one data collection and data processing became easier because of better technologies right um you need data to fuel AI training and that's been one of the big drivers the second thing that has happened is that computer processing has become faster that's like the engine so no matter how much fuel you have if you don't have that engine and processing the data on a timeframe that's reasonable was just not possible and the third thing that's happened is that new algorithms have been developed which has made AI much more powerful so #technology has been changing and developing at a pace that's much faster than ever before and we have not been used to this rapid pace of change which means that we have not been used to thinking about how it's going to impact our immediate future. The most important factor responsible for the growth of AI is Google and its AI what Google's done is given all of us the power to get the relevant information we want at our fingertips this has created a shift in how things are bought but it didn't happen overnight this started in 2004 but the major change only happens to start 2012 onwards Google's taken away about 65% of sales people's jobs that were primarily order takers and the ones that are remaining are likely to be gone over the next decade.

In present several AI projects are helping in diagnosing diseases better match up drugs with people depending on what they're sick they can get treated better so it's going to help a whole lot of people get treated and get better #healthcare than would have had access to it before if you look at self-driving cars they're going to be safer than people driving cars and the value that machine learning is providing is actually happening beneath the surface and it is things like improved search results improved product recommendations for customers improve forecasting for inventory management and literally hundreds of other things including speech-recognition or image-recognition that the performance levels are phenomenal or drug discovery as these biological systems are very complicated because vaccines for TB and HIV developing that's notably enabled by this rich data advanced in biology and machine learning and recent invention in which is an application we just launched for anybody with visual impairment as it uses the latest cutting-edge computer vision technology to give anyone the ability to see, so anyone who has dyslexia can now use AI to be able to read better and with the latest release of Windows 10 has this capability called IJ's which enable the eye muscle that the gaze can help to type. Like the two sides of the coin, there are negative impacts of AI as well Bill Gates Ellen Musk also tech giants in a way their views are pessimistic, to say the least, they warned against the potential of AI to replace humans in the workplace and Ella masks even went as far as to claim that AI is the biggest existential threat to mankind. because of the loss of a job, when you think about a job or a career choice if a majority of the tasks that comprise that career choice is likely to be these vulnerable tasks then that is a career at risk in the future so what a

re the tasks that AI will find? hard to do anything unpredictable anything that requires skills like creative thinking or empathy or interpersonal skills but it's important to understand tomorrow whether Google is there or not, artificial intelligence is going to progress you know technology has just nature it's that it's going to evolve as technology and in particular AI can, in fact, bring more empowerment more inclusiveness and at the same time it is important to be clear-eyed about displacement and unintended consequences like any other technology and work both skills so that people can find the jobs of the future create new jobs also the policy decisions that help people as they go through this change people already unhappy because of machine learning artificial intelligence as they think if they're not innovative enough or not creative enough your job will be taking away by a lot of machines AI for business going to affect the future of work specifically there are jobs that are at more risk of being taken over by AI and automation there is very wide dissonance on this, there are different reports that have been shared by Oxford study that says 47% of US jobs are at risk of automation over the next few years meanwhile the general population and workers think differently a recent study conducted by college actually identifies that 97% of workers believe that most jobs will be automated but not their own this suggests that the general public needs to be educated on which jobs are susceptible to this risk which are not and businesses need to be aware of the forthcoming skills gap of course not all jobs are equal the Oxford study that highlights this they examined 700 participants and found the generalist occupations that require creative knowledge or innovation are at least risk the same is true for occupations in education healthcare media and arts jobs on the flip side jobs like telemarketers junior lawyers accountants are at most risk in short there is a simple rule of thumb if your job is in some way predictable or routine the risk of automation is much higher if a job doesn't require innovation or creativity then the return on investment for companies is higher on machines than real-time employees machines are faster can't be distracted and can work 24/7 this is actually good for creative marketers because AI and automation can serve to augment their jobs rather than substituting them as impact of emerging technologies on the creative economy they stated that artificial intelligence is changing creative content from beginning to end by 2030 AI will be able to write high school essays code in Python composed top 40s chart songs and make creative videos but all of these advancements also come with risks and costs take a look at this report by the global Commission on the future of work in the absence of effective transition policies many people will have to accept lower skilled and lower paying jobs high-skilled workers are taking less cognitively demanding jobs displacing less educated workers and this is already happening also technological dividends are being unevenly distributed among firms a very limited amount of companies tend to dominate when it comes to big data just think about Google and Facebook today they alone are responsible for 70% of the referral marketing traffic and receive more than 50% of total global advertising budget so the question is in businesses workers and social institutions go into the same direction if companies and public policy leaders can understand the evolving landscape they can help the workforce anticipate the upcoming challenges technology and the demographic changes are leading to a smaller workforce compared to the previous generation and a workforce that has to pursue many careers during their time of work we need to provide workers with an environment where they can continuously upskill and grow governments will have to re-evaluate the educational system we will have to continuously learn and grow and companies will have to redesign their structure and their culture around technology just like during the Industrial Revolution we are heading into a new age and the great transformation that we're about to see by 2022 it is estimated that 20 to 25 percent of the labor force will be displaced within 10 to 20 years however this is also an opportunity for people to get ahead for which different ways have to be found to attract and retain highly skilled workers and allow them the time to up skill themselves even during work hours and it is a good way to develop a learning community to benefit from each other and also to use technology to supplement goal tracking and efforts instead of as a distraction in short what we are doing is to bridge the dissonance and it is imperative to build a map of how AI and automation will affect industry and company if this is an economic imperative how do people feel about committing itself to a lifelong approach to knowledge as these risks are important but it is important to do things like from being upfront to have ethical charters like AI safety and to be very transparent and open and how we perceive progress there and figure out global frameworks by which we can engage just like Paris agreement and climate change by using such forums bring people together as they engage on the hard questions and it will emerge answers and on the question of whether AI is a threat or not, artificial intelligence is not a threat because there is a rare case where people need to be proactive in regulation instead of reactive because I think by the time we are reactive in AI regulation it's too late right now we have machine learning algorithms that can solve an incredibly complex problem beyond any human intelligence as they are mere machines that can be given enormous data set and they come up with brilliant correlations and insights but they're not going to threaten the human population anytime soon because fish intelligent isn't terrible but human being a smart enough to learn that skills at least to have a complete tool box to be prepared volatility of the future adaptability.

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Ever wondered how you get notified of the products or services you want or you have been looking for for a long time. Now how does this happen? Let me start with the simple and the most known fact- Marketing, Marketing is a common term which everyone knows and is aware of. Marketing is the action of promoting products and services, including market research and advertising.

Traditional Marketing was working fine for all these years. So why there was a need for online marketing? The story begins from the internet era, The online presence of customers-

There are 4.72 billion people are on internet users in the world today and the number is increasing day by day. So if the companies want to create awareness about their products and services their is a huge audience present online.

There are a lot of benefits of online marketing like a large audience, benefits of targeting on the basis of demographics, location, age, gender, and many more. Because of this diversity, almost every type of company can use the Internet to reach any audience. All would find something of their liking.

Let's take a look at what does online marketing involves.

Types of Online marketing

Social Media Advertising

These days, almost everybody is on social media. The majority of people use Facebook, Twitter, Instagram, and other social media platforms to communicate with their friends and relatives. Some people have created companies solely based on their social media activity.

You can, however, promote your Knowledge Commerce products through social media. Whether or not you advertise on these sites.

The best social media networks for advertising-

Facebook advertising

Instagram advertising

Twitter advertising

Pinterest advertising

LinkedIn advertising

Snapchat advertising

Content Marketing

Content marketing is a strategic marketing strategy that focuses on producing and delivering useful, appropriate, and reliable content in order to attract and maintain a specific audience – and, eventually, to drive profitable consumer action.

In simple words, content marketing is a marketing strategy that producers and delivers relevant and reliable content to attract potential clients and to also retain existing clients.

PPC/Search advertising

About half of all website traffic originates from a search engine. People who use searches are often high-intent buyers. This indicates that they are searching for a particular item. They're all set to buy the products and services.

The majority of online marketing is focused on pay-per-click (PPC). However, when you hear the word "PPC," it refers to search ads.

Pay-per-click (PPC) advertising on search engines, social media sites, and other online venues can be extremely successful.

So the next time when you search for a product and services and you find similar ads on the internet this is a kind of internet marketing.

E-mail marketing

Email marketing is the highly successful digital marketing technique of sending emails to prospects and consumers. It allows communicating directly with the present, former, and potential customers. Businesses will inform the audience about new products as they become aware of them.

Banner advertising

Banner ads are rectangular or square advertisements that appear above, in the sidebar, or below the content on

websites. Usually, a banner ad leads to a sales or landing page. You will get great results by running banner ads on websites that attract members of the target audience.

#### Affiliate Marketing

An affiliate marketer, like a car salesperson, only gets paid when someone buys the stuff. You may not have to pay if there are no purchases.

Affiliates are free to sell your goods anywhere they choose (as long as the material follows the terms of service of the website). It's a fantastic way to reach new markets.

Anyone can start their affiliate marketing career by registering on the different affiliate websites.

#### Influencer Marketing

Influencer marketing is a new trend for online marketing. They have a strong following, can inspire people to buy your goods, and are loved by their viewers.

The type of online marketing that will work best for the company will be determined by many factors, including the nature of your industry, the tastes and demographics of the target market, and budget. Market analysis will guide to the best strategy or combination of strategies for your offerings, and comprehensive performance metrics will show you which are the most effective.

#### Advantages of Online Marketing

Online advertising provides a large client base for a company's services or products. All kinds of companies, from multinationals to small and medium enterprises, have access to millions of potential customers. The higher the number of users who visit your website, the more sales you can make.

One can advertise their company 24 hours a day, seven days a week, through online marketing campaigns. You just won't have to think about employee pay or shop hours. Furthermore, time differences in different parts of the world will have no impact on your campaigns.

In today's ads, social media is important. This is due to the fact that customers read comments and feedback left by other customers on the internet. Businesses can easily integrate social media tools into their advertising strategies and benefit from consumers who use social media extensively.

In an online marketing process, consumers can be demographically targeted even more effectively than in an offline process. Organizations will enhance their targeting over time, have a better understanding of their consumer base, and generate exclusive deals that are only shown to certain demographics when combined with the improved analytics.

Online marketing is a rapidly expanding industry that benefits companies in a variety of ways. The number of people who purchase goods and services online is on the rise. As a result, an increasing number of businesses around the world are turning to internet marketing to communicate with consumers and advertise their goods and services.

#### TAGSMarketing

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# Find the article text
article = soup.article.get_text()

# Print the results
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print("Article: ", article)
with open("55.txt", "w", encoding="utf-8") as file:
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### Evolution of Advertising Industry over the years.

Advertising can be described as a type of specific content broadcasting to a larger audience; the form can take several different forms, and the intended message can differ from genre to genre. The target for each medium could be different. Advertised content could be in print, radio, TV, or digital formats.

We'll look at how the advertising market has changed over the last ten decade.

Advertising is a form of communication that aims to persuade a target audience. Typical advertising messages endorse programs, goods, concepts, people, and companies.

First, conventional types of advertising were used to carry out advertising. Let's take a look at the traditional forms of advertising.

Advertising can include in-flight advertising, street furniture, passenger displays, billboards, skywriting, posters, wall paintings, banners, taxi cabs, passenger screens, television, and newspaper advertisements.

#### Press advertising-

Other types of advertising include press advertisements in magazines and newspapers. Advertising in the classified section of a newspaper is an example of press advertising. A billboard or digital screen placed on a moving vehicle is often referred to as a mobile billboard.

#### Guerrilla advertising-

When a brand or product is used in a large entertainment venue, it is known as convert ads or guerrilla advertising.

When a soft drink, a watch, or a pair of sneakers is seen or mentioned in a common film, this is an example of this.

#### In-store advertising-

Ad in supermarket videos, aisles, and on the inside of shopping carts is referred to as in-store advertising. Consumers are influenced by celebrity advertisements because of the power of wealth, fame, and popularity. However, if a celebrity falls out of favor, the use of that celebrity may be detrimental to a company.

#### Non-commercial ads-

Religious organizations, political parties, political candidates, and special interest groups are examples of noncommercial ads.

These were the conventional forms of advertisement, but as the internet and technology progressed, the advertising industry began to play a role in helping brands establish a digital presence and advertising their products in a new way.

The advertising industry is a multibillion-dollar global company that connects producers with customers. According to the research firm eMarketer, global media advertising spending totaled nearly \$629 billion in 2018, with digital advertising accounting for nearly 44% of that amount.

For more than a decade, consumers' perspectives have been shifted in favor of commercials. Advertisements are created based on the preferences of the target audience, and as the population has become more tech-savvy, advertising agencies have shifted their focus from conventional to digital advertising. The internet, as well as the devices, used to access it.

Internet advertising has evolved from a risky gamble to the main marketing medium for most businesses. Digital advertising continues to expand by double digits on an annual revenue basis in the United States, with overall spending exceeding \$129 billion in 2019.

#### Mobile marketing-

Mobile advertising is a form of advertising that uses wireless devices such as smartphones, tablets, and personal digital assistants to view advertisements. In the consumer goods and retail industries, it is extremely necessary.

Mobile advertising contents tailored to particular age groups present an opportunity for the mobile advertising industry. The challenges that the mobile advertising industry faces pose a significant risk of new entrants.

#### Content Marketing

Content marketing is an old trend that has resurfaced. Many marketers have struggled to determine how powerful banners and display advertising on other people's content are.

Companies are embedding their marketing pitch within the content itself, rather than serving an ad. This can take the form of publisher-tailored content that the advertiser can support or content that the advertiser publishes directly.

There are different kinds of businesses and websites that have used content marketing to grow and flourish in the industry. Content marketing is a trend that has contributed a large amount of income to the advertisement industry.

To summarise, the advertising industry has evolved through time and will continue to do so as technology advances, allowing advertisers to reach a wider audience and gain a greater understanding of the people to whom they are delivering material.

The advertising industry will continue to develop in tandem with innovation. People are also becoming more jaded when it comes to advertisements, pushing businesses to come up with new ways to convey their messages. However, advertisement has a promising future.

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By Ajay Bidyarthi - May 1, 2021 7073

Before we get into the whole discussion, let's first discuss the basic working of data analysis. Data analysis is defined as a process of cleaning, transforming, and modeling data to discover useful information for business decision-making. Using data analysis, we can extract useful information from the given data and then take corresponding decisions based upon the analyzed data. During the pandemic known as COVID-19, many businesses failed to grow whereas many touched the sky, for example , the transportation of raw materials was drastically low because:

The nationwide lockdown was imposed,  
Low production due to a smaller number of workers,  
Storage facilities were shut down, and many more for such reasons.

On the other hand, new business/startups got a chance to compete in the market by getting early responses from the companies they wanted to tie up with or from the head of the companies that they wanted investments from. The data analysis can help businesses in many ways such as:

Using different statistical models that are used in data analysis, the businesses can predict the approximate requirement for the product in the near future and hence they can produce it accordingly. It makes it easier to track the requirement and produce the product accordingly. Because of the lockdown, people had to start working from home, which became a huge advantage for the businesses as they would get quicker responses from their tie-ups. Using data analysis, businesses can create several models and structures to measure the growth of the company and also to make devised plans to increase the revenues and decrease the losses.

Data analysis provides different analytical techniques such as:

Text Analysis  
Statistical Analysis  
Diagnostic Analysis  
Predictive Analysis  
Prescriptive Analysis

Using these techniques, businesses can analyze everything and predict almost anything. These techniques, tools, and models, can help businesses tackle this horrendous situation that is COVID-19. Blackcoffer Insights 27: SHAILI SHARMA, St. Xavier's College

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AttributeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_30512\2402855163.py in <module>
      13
      14 # Find the article text
----> 15 article = soup.article.get_text()
      16
      17 # Print the results

AttributeError: 'NoneType' object has no attribute 'get_text'
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In [31]: import requests
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By Ajay Bidyarth - April 30, 2021 7006

The Covid- 19 pandemics forced factories to shut down, flights getting canceled and a massive decrease in the global economy, with a significant decrease in Green House Gases (GHG) in many developed and developing countries.

The SARS- Cov2 came into the spotlight in December 2019 and has impacted most of the countries till then. Nearly 131 million peoples were infected worldwide and resulting in deaths of around 2.9 Million according to World Health Organisation (WHO). Most of the countries dealt with the new virus by imposing strict lockdowns and social distancing to control the spread of the virus. These policies caused adverse effects worldwide. One of the most important impacts of the Covid-19 Pandemic is on the environment.

There have been few positive impacts on the environment due to lockdown like, air pollution has decreased dramatically, as people were asked to stay in their houses due to the lockdowns. There has also been a sharp decline in environmental noise. Environmental noise can be well defined as the unwanted or harmful outdoor sounds caused by human activities like noise emitted by road traffics, air traffics, rail traffics, and industrial activities. It is one of the most important challenges in the modern era as noise pollution can cause adverse effects on humans as well as harm many animals too. The imposition of lockdown and quarantine by various nation's governments has caused people to remain back at their homes. Because of this, the movement of people from one place to a different place has reduced significantly and the use of personal and public transport has also decreased. Due to all these changes, the environmental noise generated in most of the cities has dropped substantially.

Water Pollution at beaches have reduced significantly and many animals were spotted back in the cities, but the covid-19 virus has also generated many negative and indirect effect on the environment.

To begin with, some of the developed countries have halted their sustainability program during the pandemic. In the United States and in many other European nation-States, waste recycling plants have been suspended in many municipalities and cities due to the concern of the virus getting spread at the recycling centers. This has resulted in an increase in the use of single-use plastic bags instead of the re-usable bags by many leading restaurants, firms, and corporations. For instance, Starbucks, a leading coffee company during the month of March 2020, has announced a short-lived ban on the utilization of recyclable and reusable cups. Furthermore, with most of the people staying indoors because of the lockdown majority of the department stores, shops, restaurants, and food outlets are closed, making an online purchase and food delivery are quite high. This has created more consumption and demand for fossil fuels due to the transportation and mobility of these goods to each individual. There has been an enormous upsurge of medical waste- because most of the products employed by healthcare professionals are usually single-use items that can be used only once before they are disposed of. Some of these wastes include used masks, personal protection kits, and gloves. For instance, nearly 200 tons of medical waste were generated during the peak of the pandemic breakout in Wuhan, China. This is 50 tones more than the average waste generated before the outbreak in Wuhan.

These organic and inorganic wastes generated due to the policies crafted by the government takes a heavy toll on the environment and can cause environmental issues like water pollution, air pollution, soil erosion, and can harm the local flora and fauna.

The demand for masks during the pandemic has become skyrocketing but the materials required for the production of these masks are highly dangerous for the environment as they are generally composed of non-woven fabrics. Polyester, Polystyrene, polyethylene, and polycarbonate, are some common materials used for the surgical mask with density lying between 20grams to 25 grams/sq. meter. These materials are mostly resistant to liquids and are plastic-based products with a really high afterlife after being discarded. If not treated properly without discarding, they end up filling the landfills and the oceans making it dangerous to aquatic lifeforms. For example, recently the environment in Hong Kong has started degrading drastically during the pandemic with the accumulation of these clinical wastes.

With recycling plants on hold, piles of small mountains of wastes and their depositions at open areas are formed due to the increasing number of unrecycled wastes generated every day. This makes the surrounding more vulnerable and also creating a high risk of air pollutions as the dumped open wastes decays into Methane (CH4), a greenhouse gas, hence increasing the risk of global warming too. Not only the surroundings are getting affected by these careless methods, but the local people are also getting affected. If the excess methane gets accumulated in the Earth's atmosphere due to piles of unrecycled wastes, this could result in increases in Earth's average temperature and can be harmful to future generations.

Many protected and endangered flora and fauna are facing much greater risks due to the imposition of the lockdown. Many countries under lockdown have made people stay inside their homes. The employees, NGOs, and volunteers working in these protected areas like National Parks, Marine Conservation Zones, and wildlife sanctuaries are made to stay at home making these protected and endangered flora and fauna unattended. This has also led to an increase in many illegal activities like wildlife hunting, illegal deforestation, and fishing activities due to the absence of these people. The prohibition of eco-tourism has also led to a significant financial drop in the economy of these protected areas.

Some nations like China have asked the local authorities and native government bodies to increase the amount of disinfection routine, mainly to increase the dosage of chlorine in the wastewater treatment plant to prevent the spread of the COVID-19 virus. However, according to WHO (2020), no solid evidence has been found on the survival of the virus on the lifespan of the virus in wastewater as well as in drinking water. Despite the fact that excessive amounts of chlorine in water can cause harmful problems and issues associated with people's health like bladder cancer and it also damages its cells.

The COVID-19 is a reminder that the health of the planet is also linked to the health of humans. Evidence proves that the virus is zoonotic, meaning it can be transmitted between people and animals. They are accountable for seventy-five percent of all emerging infectious diseases in the World. With the Virus infecting millions of people every day across the globe, Various governments and agencies' top priority is to regulate the spread of t

the virus by shifting the spotlight on the management and treatment of wastes (especially the clinical and medical waste). Likewise, at the same time, we as responsible individuals need to step up and follow the necessary guideline and precautions for the disposal of the waste and medical gears.

In Spite of various data showing that the pollutions have reduced significantly during the pandemic, History has witnessed a rise in pollution during any "post-financial crisis". A similar case was observed during the 2008 financial crash – although there was a temporary decrease in emissions of 1.3% was observed, but as the economy recovered in 2010, emissions were at an all-time high. After all, only through sheer mutual empathy and good will that the world will emerge stronger after this global pandemic. To prevent future outbreaks, we must address regularly the threats to the ecosystems and wildlife, including habitat loss, illegal trade, pollution, and climate change as human life depends on Earth's life.

If you live near a spacious outdoor area, like the desert or an empty road lined with trees and you realize it's the only safe, surface-less space to take a walk in, then you begin to realize the beauty of nature. The point is not to remain indoors, but to avoid being in close contact with others. When you do leave your home, whether it is for a walk in the desert or a run on your street, make sure to wipe down any surfaces you come into contact with, avoid touching your face, and frequently wash your hands.

Blackcoffer Insights 27: Saujanya Roy, Indian Maritime University, Kolkata

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By Ajay Bidyarth - April 30, 2021 6874

Even though COVID-19 has not yet halted and we are facing the nth wave of the coronavirus outbreak across several countries, most notably the US, India, and Brazil. It is a fact that Data Analytics and AI are the big guns

of our artillery in this fight against the COVID-19 pandemic. It has helped us in several stages of this outbreak, like the detection of its first outbreak, vaccine development and manufacturing contact tracing, and future hotspot detection. Some of these interesting applications are discussed in this article.

A lesser-known fact is that the COVID-19 outbreak was first detected in Toronto, Canada, nearly 7,230 miles away from the first outbreak, nine days before the WHO issued its warning. It was with the help of Big Data Analytics and AI, more specifically Deep Learnings (DL, a subset of Machine Learning) application in Natural Language Processing (NLP) to analyze text inputs that traced the surge of pneumonia cases in the Wuhan province of China. The specialty of DL algorithms is that they mimic the brain cells called neurons and can identify patterns in Big Data. This DL-backed software is used as inputs, reports from public health organizations, global airline ticketing data, etc. These were used to flag unusual surges and potential spreads of infectious diseases.

The next application of Big Data Analytics and AI was in the Research and Development of drugs to halt COVID-19. AI was used to analyze the protein structure of the virus, findings that were significant in the progress of vaccine development. In preliminary studies, it was found that it does not mutate as fast as other viruses such as HIV, which means that a prophylactic vaccine is a better way to proceed rather than a therapy. But there is also some evidence supporting the fact that when we find any kind of cure for it, there is a chance of the virus mutating, which is what happened and major mutations have been found in the UK, Brazil, and South Africa. AI also assisted scientists in rapidly shortlisting a set of already available vaccines that could be effective against the coronavirus.

Another interesting application of AI can be found in the selection of the right candidates, i.e. most likely to test positive for testing coronavirus in case of insufficient testing resources. This method was first exercised on Greek borders and was called project EVA. Whenever a traveler wanted to come into Greece, he had to fill out a form known as Passenger Locator Form (PLF) at least 24 hours prior to arrival, containing information on their origin country, demographics, point, and date of entry, and the intended destination. EVA then allocated testing resources according to the size of the set of passengers to be tested. After the test results, if found positive, they are put in quarantine. The results were sent back to the program for real-time learning.

The question remains how EVA made allocations. It was found that, statistically, only the origin country and the city were significant factors for screening. Ultimately, from a variety of countries and city pairs, EVA had to predict how many testing resources were to be allocated at each entry point and to particular passengers from a location is technically called the Multi-Armed Bandit (MAB) problem, and the chosen method to solve this problem was an AI algorithm called optimistic Gittins index. This algorithm identified on average 1.85x as many asymptomatic, infected travelers as random surveillance testing, and up to 2-4x as many during peak travel. After the test results, if found positive, they are put in quarantine. Following the collection of significant data through the aforementioned process, after a certain period, policies were made categorizing them separately and imposing restrictions on travelers from the specific location. This EVA as presented above was in operation from August 6th to November 1st processing around 38,500 PLFs each day and testing on an average 18.5% of households entering the country every day.

Above mentioned applications just show the tip of the iceberg and there is more to get into some of the other developments to watch for include the use of Image Recognition to identify covid based on x-ray images, the use of Deep Learning to predict the 3-D protein structure associated with COVID-19 and so on.

Blackcoffer Insights 27: Aniruddha Surse, NIT Nagpur

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Data Science Analytics Artificial Intelligence Big Data Blackcoffer What We Think Machine Learning What is the difference between Artificial Intelligence, Machine Learning, Statistics, and Data Mining?

By Ajay Bidyarth - March 9, 2021 7421

"Data is the new oil" has become the most important trendline of the 21st century. The reason for this is the advancements in the fields related to data analysis. The field of AI Machine Learning Statistics and Data Mining all deal with data and are developing at such a staggering pace, that these fields have become the most popular buzzwords these days.

Buzzwords are originated through technical terms but often the underlying essence is ignored through fashionable use and mainly used to impress. This is the main reason for the misconception amongst people. AI, ML, Stats, Data Mining, and many other fields related to the analysis of data are most often mistook for one and the same thing, thus all these words are often used interchangeably to convey one and the same thing. But this is not true at all!

The only similarity between these disciplines is that all of these disciplines are related to the analysis of the data and converting this data into "information".

In academics, while learning AI Machine Learning Statistics and Data Mining, the academic approach only wander in the technical definitions and concepts but the underlying essence and the aim of the discipline remain unexplored, same is the case with most of the articles out there which try to explain the difference. Thus, becoming the primary cause of confusion between learners. Hence, this article explains the difference by explaining the philosophy and the aims of each of the disciplines rather than wandering in the technical definitions.

Then what is the difference between AI Machine Learning Statistics and Data Mining?

The essential difference between these disciplines lies in their "aims" and the approach taken to achieve those aims.

The aims of each of these fields are explained in detail in the following sections:

Artificial Intelligence:

The aim of Artificial intelligence is to understand intelligent entities. Then to satisfy this aim, we must first understand what is intelligence and what makes an agent intelligent agent? The answer to all these questions can be found by studying intelligent agents and the best example of an intelligent agent can be found by just standing in front of a mirror! Yes! Humans are the best examples of intelligent entities. Thus, in the 1900s, researchers began exploring the thought process, the reasoning process of humans as human beings were considered as an ideal intelligent agent. Mimicking human behavior became the aim of AI in the initial years of the research. After setting this goal, studies and experiments began and the most famous experiment conducted in the initial years to achieve this aim was the Turing Test! Turing defined intelligent behavior as the ability to achieve human-level performance in all cognitive tasks, sufficient to fool an interrogator. But this test received criticism as only mimicking human behavior is not exactly intelligence. Because intelligence should be related to the working of the human brain as without the human brain, intelligence has no meaning!

Thus, mimicking human thought processes and reasoning became the transformed aim. The field of Psychology and philosophy also resonate with this aim that is to understand the human thought process. The difference is that AI not only tries to understand the thought process but to mimic it, build it. The collaboration of these fields resulted in models such as Neural Networks which try to mimic the function of neurons present in the human brain. So, basically, this initial aim was human-centered and humans were considered as the ideal intelligent agent.

Concurrently, the field of computer science was developing at a greater pace. With the advances in computer science, the experiments and theories could be easily tested and validated. As programs were being applied to solve real-life problems, it was found that computers performed better than humans at some tasks that are really complex for humans. One of the best examples of this could be the chess-playing program. An AI program defeated the world's best chess player Garry Kasparov. This incident indicated that human intelligence is not the ultimate intelligence or else a human would have been able to defeat the AI program. This leads to a question, is human intelligence the ideal intelligence?

As computers became more advanced, they proved to be better than humans at certain complex tasks. That is why the new definition of intelligence was being related to the ability to solve cognitive tasks or problems. So, rather than considering the nature of agents, researchers began to study the nature of intelligence itself. Then the question comes how to test or validate intelligence? The best way to test intelligence is to solve cognitive problems. An agent can be said intelligent only if it can solve a complex problem. The problem-solving approach can be easily tested and validated on computers. Thus, some researchers began studying the ideal intelligence, and the selected agent to validate the experiments was the computer. So, a computer and problem-solving approach were adopted. So, the human-centered approach and computer, problem-solving approach are the two main aims of AI. Both of these fields have contributed to the field by giving valuable insights.

Both the aims are important and both of these collaboratively form the main aim of AI!

## Machine Learning:

In the problem-solving approach, there is a big challenge that AI has to overcome in order to achieve its aim. Consider the example of solving a math problem. There are two cases by which intelligence can be tested in this problem-solving approach. Let us say two math problems are given for you to solve. The first problem is familiar to you and the second problem is not.

Consider the first problem. The first problem is familiar to you, that means you know how to solve such kind of problems as you have already solved some similar problems in the past. So, there comes a question, how our mind is able to solve that problem? The answer is, that you have solved similar problems in the past, thus you have learned from the past data, how to solve such problems, thus even if you haven't seen that problem in the past, you will still be able to solve similar problems. This is one form of intelligence.

Consider another case where you are given a second problem where you have not solved such kind of problems in the past. Then to solve this problem, you will try to consciously gather and manipulate the given information so that you reach a certain conclusion. This kind of approach does not necessarily rely on the past data but completely on the reasoning process. This is the second kind of intelligence.

For AI to build intelligent agents, both of these kinds of intelligence must be developed in the agent. But, the reality is that AI has reached the point where it is able to build agents which can only learn from past data and find some useful information. AI today has not reached a point where it can build agents who can think on their own. That is the second type of intelligence.

So, the way AI is able to implement the first type of intelligence is through Machine Learning! So, the domain of AI which focuses solely on implementing the first kind of intelligence is in fact Machine Learning. That is the reason why ML is called the subset of AI! So, this is the main difference between AI and ML.

Technically speaking, "It is the field of study that gives computers the ability to learn from past data and find some meaningful conclusions, patterns without being explicitly programmed". This statement needs some elaboration. The essence of ML is related to the process of "Generalization" and learning from past data. Generalization is an abstraction by which common properties of specific instances are formulated as general concepts or claims. Consider how we humans recognize daily life objects. If we see an animal, then we can easily recognize if it is a "dog" or a "cat". It is a very trivial task for us but have you ever wondered how our mind is able to do it? The answer is Generalization!

If you were given a picture of a dog, you can easily recognize that it is a picture of a dog, because, our minds have abstracted the description of a dog and formulated it into a "concept" of what a dog is and these concepts became better and better as we learned from the past experiences of a dog. So, the way we think is dependent on the fact that things are represented as generalized concepts in our minds.

With generalization only, can come real "information". So, we try to give computers the ability to generalize the "raw data" and convert it into "information" which can be patterns and trends in the data on their own.

## Statistics:

This is the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data. Statistics tries to deal with data with the only aim that is to explain it. So, it is the study of explaining the data itself! Statistics has two main domains which are Descriptive statistics and Inferential statistics.

Descriptive statistics deals with the explanation or description of data thus the name "Descriptive" statistics. It tries to explain as much information as possible, easily about the whole large data which would be a very complex task otherwise.

Inferential statistics try to make accurate inferences from the available small data. We use inference in many tasks in our daily lives. Consider a simple case of cooking a soup. After completing the recipe, you will taste a small sample, that is, a spoonful of the soup to check if the soup tastes good or bad. Depending upon the result of the sample, you make an inference about the whole soup that if the soup as a whole, good or bad. Similarly, in statistics, there are cases where you have to apply inference to have meaningful information. For example, consider a case where you cannot gather the whole data because it is very time-consuming and costly. In these cases, applying inference based on the available sample introduces uncertainty. That is where inferential statistics come for help.

So, the use of data in the context of uncertainty and decision-making in the face of uncertainty is what statistics deals with. So, however, and whatever the data, statistics tries to explain that data. This aim does not resonate with that of AI and ML, but statistics help these fields to correctly interpret the data!

## Data Mining:

"Data", is not useful at all in its raw form. Consider examples of sensors used in industrial applications. These sensors might be used in a manufacturing plant to sense different properties like temperature, pressure, etc. The raw data generated by these sensors are not useful until and unless it is converted to a suitable form, then processed, analyzed to gather valuable insights, which can be used to solve a problem!

Due to its unique aim of capturing the essence of very large datasets, to gather insights, Data Mining is also referred to as "Knowledge Discovery". That is why, Carly Fiorina, former CEO of Hewlett-Packard once said, "The goal is to turn data into information and information into Insight". This statement completely explains the aim of Data Mining!

So, the difference between AI Machine Learning Statistics and Data Mining lies in their aims. But the approaches taken in all of these fields, help in one way or the other in fulfilling the aims of the other fields. This is the beauty of these fields!

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Data ScienceAnalyticsArtificial IntelligenceBig DataBlackcofferWhat We Think How Python became the first choice for Data Science.

By Ajay Bidyarthi - March 4, 2021 7902

Data Science is gaining popularity exponentially over the past decade, and thanks to that we are now enjoying better products, recommendations, and smoother life. Data science is an interdisciplinary subject that includes statistics, math, IT, etc.

Now there is so much to do in Data Science, so we need an arrangement where all this can be accessible in one place. It will be very hectic to go to hundreds of different resources while doing analysis or building models. But don't worry, PYTHON is there for you.

Yes, you read it right, Python is a general programming language that can provide everything you need for Data Science. Several features that have made Python become the choice of data science in past times are:

1. Python is a progressively typed language, so the variables are defined automatically.
2. Python is more readable and uses lesser code to play out a similar task when contrasted with other programming languages.
3. Python is specifically typed. In this way, developers need to cast types manually.
4. Python is an interpreted language. This implies the program need not have complied.
5. Python is flexible, convenient, and can run on any platform effectively. It is adaptable and can be integrated with other third-party software effectively.

Now let's see why Python become the choice of data science:

### PANDAS

This library available in python makes it very easier to analyze the data, you can read a variety of data sets like CSV, XML, XLSX, JSON, etc. You can perform several operations like Groupby, sorting with the help of easily accessible objects from pandas.

### NUMPY

This package helps you with any numerical operation that is needed to be performed in Data science, for example calculating Euclidean distance, finding ranks of the matrix, etc.

### matplotlib AND SEABORN

These are excellent data visualization libraries available in python that produce some excellent visualization like shown here,

#### sklearn

It provides you state of the art machine learning algorithms for your accurate predictive analysis. Scikit-Learn is characterized by a clean, uniform, and streamlined API, as well as by very useful and complete online documentation. It provides a selection of efficient tools for machine learning and statistical modeling including classification, regression, clustering, and dimensionality reduction via a consistent interface in Python.

#### KERAS

Keras is an open-source software library that provides a Python interface for artificial neural networks. Keras acts as an interface for the TensorFlow library. Keras is an industry-strength framework that can scale to large clusters of GPUs or an entire TPU pod.

See, Now that you have a variety of resources available here in python, then why go anywhere else. Python is also becoming the world's most loved and most wanted programming language and it will surely help to get you the job. Data science consulting organizations are empowering their group of developers and data scientists to utilize Python as a programming language. Python has gotten well-known and the most significant programming language in an extremely brief timeframe. Data Scientists need to manage a large amount of data known as big data. With simple utilization and a huge arrangement of python libraries, Python has become a popular choice to deal with big data.

Seeing the stats we can clearly see that Python has taken over other Languages needed for data science. It has also surpassed R which is exclusively built for Data science. Isn't this exciting.

Python in Data science has empowered data scientists to accomplish more in less time. Python is an adaptable programming language that can be effectively understood and is exceptionally amazing as well.

Python is highly adaptable and can work in any environment effectively. Additionally, with negligible changes, it can run on any operating system and can be integrated with other programming languages. These qualities have settled on Python as the top choice for developers & data scientists.

So next time you do analysis or work on any Data Science project, feel proud cause you are working with the most loved language of the world.

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By Ajay Bidyarth - March 4, 2021 7136

It was in March that Tech giant Google came up with a ground-breaking announcement of Google Fit able to measure one's heart and respiratory rates using their smartphones. This news spread like wildfire. Instantly became the talk of the town. This feature was said to be available to the Google Fit app exclusively to its Pixel phone users. Google also plans to expand to its other Android devices in the future.

This was after Google's newest endeavor of acquiring the Fitbit for a whopping \$2.1 billion. This acquisition not only does steps up a stage for a potential Google Smartwatch but also gives Google the ownerships to Fitbit's health business and wealth of data assets. Users just need to place their head and upper torso in view of the front-facing phone camera for those who wish to measure their respiratory rate. For measuring Heart rate the user just has to place their finger on the rear-facing camera lens. Mind-blowing right!

Once the measurements have been taken the users simply have to store and save them in the Google Fit app to monitor and track their day-to-day wellness. On asked how it's measuring these heart rate and respiratory rate, Google Health director of health technologies Shwethak Patel explained that these features rely on the sensors that have been built into the smartphone, such as its camera, microphone, and accelerometer. Thanks to increasingly power sensors even in affordable smartphones and advancements in computer vision, these features let use one smartphone's camera to track even tiny physical signals like your chest movement to measure your respiratory rate and subtle changes in the color of your finger for your heart rate.

Pixel underwent and completed initial clinical trials to validate the algorithm cloud work in a variety of different world conditions and that too with many people while developing the features. Since our heart rate relies on approximating blood flow from color changes in someone's fingertip, it has to account for factors such as lighting, skin tone, age. Adding to be able to measure heart and respiratory rate soon Google Fit also displays user daily stats such as daily goals, weekly goals, heart points, workout, and also sleep monitor.

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By Ajay Bidyarth - February 12, 2021 7300

From what I have learned on the mobile apps development market recently, it is becoming harder for an Android or iOS developer to find a suitable and well-paying job in the market.

Some major reasons include the increasing supply of mobile engineers, people generally stop downloading apps, and many more.

In this article, I will go through a more detailed explanation of the recent trend mentioned above and my two cents on what mobile engineers could do to prepare themselves for the upcoming challenge! and the future of mobile apps.

#### Coding Bootcamps Increase the Supply Side for mobile apps Developers

Although the demand for mobile developers has not fallen sharply compared with previous years, the growth rate has slowed. On the other hand, owing to a great number of coding boot camps that target to bring up mobile and frontend engineers, a great number of developers are flooding into the developer job market.

The supply side for mobile engineers has increased rapidly in recent years, raising the standards for qualified mobile engineers. The days of a mobile engineer easily getting over 10 job offers are over.

Recode ran an article in mid-2016, that begins: "The mobile app boom kicked off in July 2008, when Apple introduced the App Store. Now it is over."

According to data gathered and analyzed by the CakeResume team, JavaScript and Python are now the most in-demand programming languages for companies who post product development jobs on CakeResume, both together taking up almost half of the job opportunities, while mobile engineers taking up merely 10% of the job opportunities.

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#### Overview

#### People Stop Downloading mobile apps

While App usage continues to grow and revenue also ascends, the majority of consumers actually download zero apps per month

let's face the truth, born and raised up in the era of the information explosion, individuals don't have the leisure to check on what's new on the app store every day. When it comes to choosing an App to download, many people feel overwhelmed by the sheer number of options available.

Take the productivity category of the App Store as an example, there are over thousands of Apps in this category, and new Apps popping up almost every week. It is almost impossible for users to dig through and learn all the apps. They just choose what is on top then click Install.

And not to mention that if you could build an awesome productivity app, Google and Apple could do it 10 times better and faster than you. In the end, there's not as much need for individual apps to accomplish similar convenience factors.

#### What You Could Do to Prepare for The future Changes for mobile apps

Although the bull run for mobile development has ended, there are still over 2 billion smartphone users, 27.5 billion mobile apps downloaded, and time spent per day on mobile devices has increased rapidly in recent years. Moreover, apps offer a user experience that even 'Responsive Websites' are unable to provide.

In order to stay on top of the game, you will have to differentiate yourself from the pack – other mobile engineers. If you are a mobile engineer who only knows how to code and tweak your App's UI, you aren't that different from others after all. Below I listed a few ways that you could implement so that you could stay competitive in the job market.

#### 1. Choose Newer Technologies When You Have the Chance

If you are an Android developer, you could start choosing a job involving Kotlin or Flutter, which are backed by Google. If you are an iOS developer, try to look for a job to get involved with using Swift.

Although older mobile coding languages, such as Java and Objective-C, still have their upsides, the main reason why Kotlin and Swift are created at first is to address the older languages issue. It means that Kotlin and swift provide many safety mechanisms available out-of-the-box while being more concise and expressive than Java and Objective-C at the same time.

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#### 2. Build Up Your Domain Knowledge and Industry Skills

This point is especially crucial. Each industry has its specific skills to learn and refine. For example, if you are building a stock, foreign exchange, future, or options market app, you will have to understand the WebSockets protocol, which lets you transfer as much data as you like without incurring the overhead associated with traditional HTTP requests.

For the streaming media industry, possessing experience with live streaming protocols such as HLS, RTMP, WebRTC will be a must to deal with streaming-related apps.

These industry skills can really make you stand out, and adds another layer of expertise to your already pretty impressive mobile engineer title, making you more valuable in the job market.

#### 3. Follow the Irresistible Tech Trend

The future of mobile app development will be shaped by how businesses harness mobile technology to solve people's everyday problems.

Don't try to fight the irresistible trend, see how you can surf the trend! Exposing yourself or trying to get a job in the field mentioned below will absolutely give you more opportunities as a mobile developer.

So what are the trends for mobile apps development?

IoT (Internet of Things) "The driving force behind the growing mobility market is the impact of the IoT and its broad reach," writes the experts at Maryville University online. In the future, apps will need to speak to each other, in the same way, that devices in the IoT communicate. The market needs companies that can develop custom IoT applications – sensors and devices, web apps, and both B2B and B2C mobile end-user apps.

AI (Artificial Intelligence) According to experts at Maryville University, AI is everywhere, from predictive analytics algorithms used by retailers like Target and Amazon to anticipate shopping needs to fraud detection monitors from banks and credit cards. Some more examples: Tinder uses machine learning to increase a user's chances to find a match. Google Maps makes the process of choosing a parking spot easier.

AR (Augmented Reality) and VR (Virtual Reality)

Tech Giants such as Apple and Google have launched their own augmented reality kits – AR Kit and AR Core respectively to help app developers to create high-quality mobile apps. As for VR, the latest buzzword associated with it is v-commerce. One of the examples is Alibaba, which in November of 2016 introduced VR shopping to its customers across China.

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By Ajay Bidyarth - February 11, 2021 7241

AI allows those in training to go through naturalistic simulations in a way that simple computer-driven algorithms cannot. The advent of natural speech and the ability of an AI computer to draw instantly on a large database of scenarios means the response to questions, decisions, or advice from a trainee can challenge in a way that

t humans cannot in health and medicine

Health monitoring:

Wearable health trackers-like those from FitBit, Apple, Garmin, and others- monitor health rate and activity levels. They can send alerts to the user to get more exercise and can share this information with doctors.

Technology applications and apps encourage healthier behavior in individuals and help with the proactive management of a healthy lifestyle.

AI increases the ability for healthcare professionals to better understand the day-to-day patterns and needs of the people they care, for better feedback, guidance, and support.

Medical imaging:

Machine learning algorithms can process unimaginable amounts of information in the blink of an eye and provide more precision than humans in spotting even the smallest detail in medical imaging. A few of them are Blackford, Zebra, Enlitic, Lunit.

The company "Zebra Medical Vision" developed a new platform called profound, which analyzes all types of medical imaging reports that are able to find every sign of potential conditions such as osteoporosis, aortic aneurysms, and many more with a 90% accuracy rate.

Digital consultation:

For eg, the digital health firm #HealthTap developed "Dr. AI", and apps like Babylon in the UK use AI to give medical consultations based on personal medical history and common medical knowledge. Users report their symptoms into the app, which uses speech recognition to compare against a database of illness and asks patients to specify symptoms to triage whether they should go to the ED, urgent care, or a primary care doctor.

AI robot-assisted surgery: Robots have been used in medicine for more than 30 years. Surgical robots can either aid a human surgeon or execute operations by themselves. They're also used in hospitals and labs for repetitive tasks, in rehabilitation, physical therapy, and in support of those with long-term conditions.

Health chatbots such as Babylon, Ada, and mostly close-ended communications.

Machine learning is a type of AI that allows computers to make predictions without being explicitly

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Objective decision making with less variance

High speed and efficiency

Unlock the power of big data and gain insight into patients.

Support evidence-based decision-making, improving quality, safety, and efficiency.

Coordination care and faster communication

Improve patient experiences and outcomes

Deliver value and reduce costs

Improve health system performance and optimization

Examples of AI in healthcare and medicine

#MICROSOFT: Predictive analysis in vision care

#GOOGLE: clinical decision support in breast cancer diagnosis

#IBM WATSON: precision medicine in population health management

Actionable medical insights: An ever-increasing amount of medical data are being digitized at all public and private healthcare institutions. However, by its very nature, this kind of data is messy and unstructured. Unlike other types of business data, where traditional statistical methods can be used for quick insights, patient data is not particularly amenable to simple modeling and analytics tools.

For eg.- Enlitic, a San Francisco-based start-up, has a mission of mixing intelligence with empathy and leverage the power of AI in health and medicine for precisely generating.

Therefore, a massive parallel effort to rationalize the legal and policy-making is needed to bring the full benefit of advancement in AI technologies into the healthcare space. As technologies and AI/ML enthusiasts, we can only hope for such a bright future where the power of this intelligence.

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BlackcofferWhat We ThinkFuturePrediction What patients like and dislike about telemedicine?

By Ajay Bidyarth - January 13, 2021 7271

In today's world, telemedicine technology is one of those technologies which has brought about a change. Compared to the early days there have been remarkable differences in the methods of consultation with a doctor. In these years that have passed by, consultation for a disease with a doctor was quite hectic. It involved waiting, traveling, etc. But with the advent of telemedicine opportunities, this has completely changed.

It is a rural area that has been completely blessed with the invention of telemedicine. Today a considerable amount of people are able to consult doctors remotely. Not just doctors, but specialists in various fields of medicine. This has been of great importance as far as rural people are concerned. There are a lot of telemedicine tools that have been found. There are a lot of areas like ophthalmology, oncology, dermatology, etc where the facility of telemedicine has been practiced.

Most of the patients are truly benefitting from telemedicine. Patients are pretty satisfied with the consultation they are getting. They don't have to travel now. They can consult doctors and other specialists from remote areas. The cost of consultation has become pretty much affordable. Moreover, they get exposed to highly efficient and qualified experts in the field of medicine.

On the other hand, there can be patients who do not fully get satisfied through a virtual consultation. Rather they might feel that they need to have a direct talk with the doctor, which can boost up their confidence and also it helps to maintain a better relationship with the doctor and patient. The patients feel trust when they talk to doctors face to face. Moreover, doctors also might be able to console their patients when they have direct interaction with their patients. There could also be patients who doubt if these virtual methodologies are really trusted worthy or not. It is so because, while the patients have direct contact with their patients, the qualifications are visible to the patients. So there shall be no question of distrust.

There are major challenges like better connectivity of the internet, without which the patients will not be able to have continuous interaction with the doctors. Technical glitches may hinder the consultation too. Moreover, emergency situations cannot be addressed beyond a limit through telemedicine.

Blackcoffer Insights 23: Miriam sam, Scms school of technology and management.

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title = soup.title.get_text()
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By Ajay Bidyarth - January 13, 2021 6995

TECHNOLOGY is playing a dominant role in human life. And as in our daily lifestyle technology is used each and every place where human beings are present. so How we forecast future technologies?  
So, the fact is that technology is not a single immutable piece of hardware orbit chemistry. It is simply knowledge of physical relationships and it systematically applied to the useful arts. This knowledge can vary continuously over time. It can range basic phenomenon can be applied to an end product, device, or production machine in a mature operating system. Even as time passes, the performance characteristics of any machine, product, or operating system are normally improved in small continuous increments over time.  
Advance in technology is usually nothing more than an accumulation of small advances not worth introducing individually to make a significant change in total technology. Forecast future technologies no matter how accurate – unless they eventually influence action.

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BlackcofferData ScienceData VisualizationWhat We ThinkFutureInternet of Things Can robots tackle late-life loneliness?

By Ajay Bidyarth - December 2, 2020 6794

In this era, everyone is busy in his life. No one spares time for someone. so robots tackle life loneliness? We have no time to stand and stare. This causes loneliness. Loneliness is due to fast-moving life and hurry and worry. In the 21st century, everyone is spending most of their time earning money. They are day-by-day transforming into money-earning machines. Due to his perception, we are losing our relations as we can't give enough time to our families. They are busy earning their livelihood. They never get satisfies and always want more. Everyone is in a race of earning and then sends his children far away from himself to make them well settled in order to maintain their status. But one faces the consequences of this kind of lifestyle in his old age. People usually don't spend time with their children when their children are in their childhood but they yearn for the company of their children in their old age. They feel lonely but have none to talk with. They are still attached to people, places, belongings, and memorable events from the past, although they understand that life cannot continue the same way as earlier, and this may easily result in feelings of loneliness and social isolation. As they become older, they need to be attended to in order to meet their daily needs. Robots can indeed serve the purpose but they can aid only mechanical care. They are just emotionless, feeling fewer entities. Robots aren't creative. They can work only according to a pre-programmed system and till now no such software has been created that can transfer human feelings into robots. This is the major loophole of using robots to tackle late-life loneliness. They can undoubtedly serve their masters but their masters can't share their feelings with them as they are incapable to understand or react to them. They can't change their activity according to the occasion. They can provide anything except emotional satisfaction and without emotional gratification, loneliness can't be tackled. A master can be attached to his robot but that attachment is only due to their service. They can't share their thoughts with them. In this era, we are rendered lonely and in late-life feel the need for a companion with whom we can talk. We feel a need for someone who can listen to us, react, and advise us to tackle our day-to-day life problems. But we can't find one. We have, undoubtedly, achieved great progress in terms of technology but we can never fill the void in the heart of a person struggling with his late-life loneliness with our advancements. We are in a kind of mental trance in which we experience fame, progress, wealth, etc. but when we gain in our consciousness, we find ourselves lonely in this world. Relations in life are actual wealth in a person's life. We can never enjoy such a bond with a robot. It will follow our commands, take our appropriate care but can't react to our emotions. It can't console us. When a man lives in loneliness for a long time, it eats up his conscience and transforms him into a machine. Robots can never become our friends, crack jokes, weep our tears, or establish an emotional connection with us. They can't understand our feelings. Many people go into depression. Depression or the occurrence of depressive symptoms is a prominent condition amongst older people, with a significant impact on their well-being and quality of life. They remain sick and loneliness directly impacts longevity. Lonely people often think that they are no longer needed in this world and thus they want to die. It impacts their mental, psychological, social, and physical health. Robots prove to be useless in these matters. They can provide motivation, only if they have the software to do so but can't, themselves, react to such a situation. They don't know about anger, happiness, or sadness. They don't themselves bring food when their master is hungry until commanded to do so. They can't even offer a glass of water themselves. A man living without relations and without fellow feeling no longer remains a human being. He becomes none less than a machine as, due to his loneliness, he becomes mentally ill and goes into a condition like trauma where he no longer enjoys nature's blessings, becomes happy or sad as he loses the ability to react and hence can't act. It's a dangerous situation. We face a plethora of challenges in assisted living facilities such as not being addressed to emotional needs, being neglected, and forcing a withdrawal from social activities. Relations in life, interaction with fellow beings, sharing of joy and happiness, and fellow feeling make a man from mere a 'being' to a 'social being' and finally a human being.

Blackcoffer Insights 22: Ishatpreet Singh, IISER (Mohali)

TAGS#darknessofloneliness#impactonpsychologicalhelth#mechanicalcare#noemotionalcompanion#noneedinworld#realitions#servantnotfriend

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By Ajay Bidyarthi - December 2, 2020 6975

Care Robots, as the name suggests, are robots that are used for hospitality purposes like fetching water, cracking jokes and keeping a patient in good harmony, etc.

The senior care industry has been at the forefront for quite a period. The reason being, Nuclear families becoming very busy in their schedule that one day when the parents of this nuclear family are old, children are nowhere to take care of. Instead, nursing homes have become a trend. Parents with mental illness are being put in rehab.

As observed for a few decades robots are taking care of many activities and they are even dominating a few fields like the automobile industry. So, Machines can indeed help humankind in achieving remarkable success in many fields.

Do senior citizens love machines ?, You should look at them when they watch TV when they love to play video games on a smartphone. So, If we give them a human-like structure with the ability of a smartphone to make these people happy then it would be quite a monstrous feat.

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By Ajay Bidyarthi - December 2, 2020 7422

Management acts as a guide to a group of people working in the organization and coordinating their efforts, towards the attainment of the common objective. Management challenges for future digitalization of healthcare services

CHARACTERISTICS for future digitalization of healthcare

Universal: All organizations, whether it is profit-making or not, require management, for managing their activities. Hence it is universal in nature.

Goal-Oriented: Every organization is set up with a predetermined objective and management helps in reaching those goals timely, and smoothly.

Continuous Process: It is an ongoing process that tends to persist as long as the organization exists. It is required in every sphere of the organization whether it is production, human resource, finance, or marketing.

Multi-dimensional: Management is not confined to the administration of people only, but it also manages work, processes, and operations, which makes it a multi-disciplinary activity.

Group activity: An organization consists of various members who have different needs, expectations, and beliefs. Every person joins the organization with a different motive, but after becoming a part of the organization they work for achieving the same goal. It requires supervision, teamwork, and coordination, and in this way, management comes into the picture.

## LEVELS OF MANAGEMENT

Top-Level Management: This is the highest level in the organizational hierarchy, which includes the Board of Directors and Chief Executives. They are responsible for defining the objectives, formulating plans, strategies, and policies.

Middle-Level Management: It is the second and most important level in the corporate ladder, as it creates a link between the top and lower-level management. It includes departmental and division heads and managers who are responsible for implementing and controlling plans and strategies which are formulated by the top executives.

Lower Level Management: Otherwise called functional or operational level management. It includes first-line managers, foremen, supervisors. As lower-level management directly interacts with the workers, it plays a crucial role in the organization because it helps in reducing wastage and idle time of the workers, improving the quality and quantity of output.

## future digitalization of healthcare

In the current day and age, a wave of digitization has taken over the world. All the emerging technologies like Artificial Intelligence and others are helping people live better and easier life. The service sector has also benefited a lot from digitization. It got further boost when Prime Minister Narendra Modi, in the year 2015, launched a campaign known as 'Digital India.' Among the various industries in the service sector, digitization has had a massive impact on the operation of the healthcare and diagnostic industry. It has helped in the development of this industry and enhances life for millions of people. The condition of India in terms of health care has been quite grim. Patients who need attention are neglected and are unable to avail proper treatment or diagnosis. However, with the coming up of digitization, there has been hope for this industry also.

According to Dr. Keshab Panda, CEO & MD, L&T Technology Services,

there are three trends emerging in the healthcare and diagnostics ecosystem as a result of digitization.

### 1. Value-based healthcare

This is a model of healthcare where doctors and hospitals are paid based on patient health outcomes. The coming up of digital tools in this segment of healthcare can be considered as the starting tool. Dr. Panda further says that the implementation of advanced digital technologies in patient-care domains like- mobile health apps, te

lehealth, wearables, and remote monitoring can help in enhancing accessibility, boost efficiency and augment the effectiveness of treatment and preventive care.

## 2. New product development

The healthcare industry over the past few decades has changed drastically. With the coming of emerging technologies, new surgical procedures and medical devices have been made available.

## 3. Connectivity

While talking about connectivity in healthcare, Dr. Panda said that with digitization taking over the industry, it is only a matter of time when with the help of the internet and smartphones, digital healthcare will be everywhere. The internet for once has helped doctors connect to their patients and also with one another. This has helped in enhancing the doctor-patient engagement by increasing their interaction time.

Big data aggregates information about a business through formats such as social media, eCommerce, online transactions, and financial transactions, and identifies patterns and trends for future use.

For the healthcare industry, big data can provide several important benefits, including:

Lower rate of medication errors – through patient record analysis, the software can flag any inconsistencies between a patient's health and drug prescriptions, alerting health professionals and patients when there is a potential risk of a medication error.

Facilitating Preventive Care – a high volume of people stepping into emergency rooms are recurring patients also called "frequent flyers." They can account for up to 28% of visits. Big data analysis could identify these people and create preventive plans to keep them from returning.

More Accurate Staffing – big data's predictive analysis could help hospitals and clinics estimate future admission rates, which helps these facilities allocate the proper staff to deal with patients. This saves money and reduces emergency room wait times when a facility is understaffed.

## Challenges for future digitalization of healthcare

### 1. Cybersecurity

Although ransomware, data breaches, and other cybersecurity concerns are nothing new to the healthcare industry, the 2020 Covid-19 pandemic revealed just how vulnerable sensitive patient health information really is.

The recent growth of digital health initiatives- like telehealth doctor visits – is a major contributor to the severe increase in breached patient records. As more healthcare functions continue to move online over the next year, it's extremely important to ensure these processes are protected from outside threats.

### 2. Invoicing and Payment Processing:

Medical practices are citing patient collections as their top revenue cycle management struggle as patients are becoming responsible for a larger portion of their medical bills. In order to help encourage patients to submit payments in a timely manner, providers must adhere to patient payment preferences.

To meet patient expectations and improve the user experience, ensure billing statements are patient-friendly. You should offer paperless statements and a variety of payment options (e.g. credit card, etc.) via an online patient portal and utilize the latest payment technologies, such as mobile and text-to-pay. New features like text or email reminders help effectively communicate with patients and encourage them to pay their financial obligations.

### 3. Patient Experience

The medical insurance landscape has experienced some significant changes in recent years. As more patients are responsible for a larger portion of their healthcare bill, they naturally demand better services from their providers.

Healthcare organizations will face tougher competition in attracting and retaining patients who demand an experience that matches the level of customer service they expect from other consumer brands.

They demand a streamlined patient experience so they can "self-service" to resolve most questions, issues, or concerns (e.g., downloading an immunization record, booking an appointment, paying their bills, or checking their account/insurance status) whenever, wherever, and however is most convenient for them.

Blackcoffer Insights 22: PRIYAM VERMA AND RIYA MALIK

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By Ajay Bidyarth - October 23, 2020 7046

One thought always comes to my mind...What if we lived without that danger hanging over our heads? And you all know what is that danger is. For more than 70 years the world has faced the very real threat of nuclear war. Nuclear war is a real and growing threat. The United States and Russia have left critical agreements and treaties, while actively planning to add new types of weapons to their arsenals. Meanwhile, US nuclear policy remains rooted in the Cold War, increasing the risk that nuclear weapons could be used again. It doesn't have to be this way. With the right policy changes and a commitment to diplomacy, the United States can be a leader in reducing the nuclear threat and we can also help them. But the question arises is what are the activities are being done for the prevention of nuclear holocaust? And they are :

Pressuring Congress to support change, Holding the White House accountable through independent research and analysis, Increasing public demand for changing nuclear weapon policies. Now the question is what can we do to prevent a nuclear holocaust? Tell government: Don't fund a nuclear arms race. Call for investment in public health and public security, not nuclear weapons. Tell government: The United States should never start a nuclear war. Urge presidential candidates to make preventing nuclear war a priority. ACTIVIST RESOURCES Nuclear weapons are extremely strong to show the power of a nation. But no one knows the drawback of this attack between the two countries. For example Hiroshima and Nagasaki, the realistic bomb blast explained the blood of each people. The crux of my presentation is that the circumstances surrounding nuclear war call for a new level of commitment by the scientific community to reduce the risk of nuclear war. To generate new options for decreasing the risk, we need a analytical work by people who know the weaponry and its military uses. But that is far from enough to do the job. We also need scholars who know the superpowers in-depth; people who know other nuclear powers; people who know third-world flashpoints; people who know international relations very broadly; people who know a lot about policy formation and implementation, especially in the superpowers; people who understand human behavior under stress, especially leadership under stress; people who understand negotiation and conflict resolution people and much more. In other words, the relevant knowledge and skills cut right across all the physical, biological, behavioral, social. International Physicians for the Prevention of Nuclear War, World Health, British Medical Association, and the American Medical Association; others have contributed as well. The central point is that a kind of awakening has occurred in the medical community to the responsibility of addressing the immense nature of the threat to public health. At last, I want to conclude that: "In a nuclear war, except evil force, no one is the winner. Science and humanity become the villain. Everyone knows that but the gamblers want to play their cards. Be aware of the nuclear gamblers ". I hope that soon the world will be full of love and affection and there will be no place for hate and the wars will be held.

Blackcoffer Insights 21: Rutika Pagar, C.M.C.S College Nashik

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By Ajay Bidyarthi - October 22, 2020 7008

Imagine yourself as a being who can speak but no one can comprehend you. You are kept in captivity, in a place where you can hardly breathe. You are finally selected and taken out of that place, it is a happy moment for you. You can finally have your freedom but sadly instead of being free, you are prodded by rods and fed toxic substances against your will. The only thing you can do is scream in vain. Your voice is heard by everyone but it gets lost in the noise of scientific advancement. You writhe in pain as the substances take effect on your body, the pain slowly creeps into your body and you slowly succumb to it, never to wake up again.

Since the time of Aristotle, animals have been subjected to various inhumane experiments for the sake of knowledge. These experiments though unethical were very necessary for the advancement of science. Animal testing has become an important part of experimenting on living organisms to ensure that a product is safe for humans to consume. The lab animals are generally subjected to high levels of toxicity while being kept in isolation due to which they have to suffer a lot of stress and discomfort. Animal testing has a large number of drawbacks: Animals and human beings react differently to certain substances. For example, in 2004, Vioxx withdrew "rofecoxib" after more than 80,000 people suffered heart attacks after taking the drug. Although the drug showed no such effects during animal testing, it posed threat to human beings. It is very costly to conduct animal testing as animals need to be provided with shelter and food over a large period until the trials are completed. Animal testing might not lead to a scientific breakthrough. There are various instances of animal testing failing to achieve the desired result which ultimately leads to loss of time, resources and money. Some products like cosmetics may not be essential to humans and therefore don't require animal testing at all. The cosmetic industry is notorious for animal testing of products and it's a pity that some of those products aren't even launched in the market.

All of these things make us question ourselves. Is it even worth it? Is it possible to stop this cruelty without hampering our growth?

With the advancement in science, it can be made possible that we don't have to use animals ever again. Advanced computing- With the availability of various software programs it has become easier to understand the working of a biological organism. We can replicate the entire human body and conduct various tests to generate simulations to assess the possible effects of a chemical or biological reaction. For example, CADD (Computer-aided drug design) is becoming popular for stimulating whether a particular drug affects the cells or not. This cuts down the requirement of using animals for testing and also reduces the experimentation time as the researchers don't have to wait for the animals to show response. Tissue Culture – Growing tissues in Petri dishes and in vitro cells can be a viable alternative to animal testing. Tissues and cells from brain, liver, kidney etc. is taken from an animal and kept in a suitable growth medium for a few weeks or even for a year. These cultures can be used to test the toxicity and efficacy of substances. For example: In eye irritancy tests, new animals have to be used in each experiment to check if the substance is irritating the eye or not. Many animals permanently lose their eyesight and using a new animal every time is just simply inhumane. Using bovine corneal organ culture in which the corneal tissue is cultured for three weeks before using it yields the same result without any complications. Scientists have started to use this method to test for toxicity and efficacy in cosmetics, drugs and chemical sectors. 3-D printing- Making complex tissue structures from a single digital file is astonishing. Printing tissues can help in carrying out experiments on it and getting results similar to the real tissues. For example Earlier animal organs, charts and 3-D models were used to explain the functioning of a particular organ to medical students but now bio-printing companies have started making human tissues and organs which are used by students in various medical schools to understand the intricacies of human organs which has helped in bringing down animal experimentation to a large extent.

These bio-printed models can also be used by the researchers to conduct experiments on them without using animals for it. A French company is working on a bio-printed liver model to test liver toxicity without having to use animals at all. This is a breakthrough in the field of bio-technology as it can bring down animal experimentation by a large percentage.

Organ-on-a-chip method – It is a fairly new technology which consists of growing cells inside chips where they

imitate the structure and behavior of human organs. Researchers can test drugs on these chips and it is far cheaper and humane than testing on animals. For example, UK Company CN Bio has come with a system which consists of 10 organs on a single chip and they have tissues ranging from the liver to the brain. Micro dosing: Humans can participate in these experiments in which they are injected with small one time doses and are constantly monitored under imaging techniques to gather information on the changes happening in the body. These tests can replace certain tests on animals and help in removing drug compounds that don't have the desired effect on the human body. For example, COVID-19 tests were carried on human volunteers in which they were given small doses of the vaccine and kept under constant surveillance. This helped the researchers in removing the drugs that were not having the desired effect on the human body and thus they were also able to remove animal testing as one of the processes.

These alternatives can help in bringing down animal experimentation to a large extent. If science can progress without harming animals then we should go for it rather than putting them through excruciating pain. We must protect the animals as much as we can or else we would soon be living in a world without them.

Blackcoffer Insights 21: Eeshan Singh and Sowmya K P, ICFAI Business School, Hyderabad

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By Ajay Bidyarthi - October 22, 2020 6980

#### Introduction

The definition of consciousness has been controversial for centuries, hence it is given the title of the 'most familiar and yet mysterious aspects of our lives'. An idea of this concept would be an awareness in beings of their surroundings, themselves, and their own perception. The reason this part of our mind remains unascertained is that consciousness isn't observable, unlike brain matter that is studied scientifically. The physical clarification of awareness is in a general sense incomplete: it doesn't include what it feels to be the subject, for the subject. There likewise is by all accounts an unbridgeable illustrative gap between the physical world and

our consciousness. As suggested by an incident of Eastern and Shamir traditions, consciousness is both universal and primal. Whilst we have made tremendous progress in understanding brain activity over the years, this research hasn't been able to answer all the questions relating to the nature of emotions and experiences.

#### History

Beginning within the late nineteenth century, this was a time that once had psychological queries driven by a philosophical understanding of the mind, which was typically equated with consciousness. As a result, the analysis of brain and behavior naturally thought of the role of consciousness in behavioral management by the brain. The Ancient Mayans were among the first to propose a sorted out feeling of each degree of consciousness, its purpose, and its worldly association with mankind. Since consciousness incorporates stimuli from nature as well as interior stimuli, the Mayans trusted it to be the most essential type of existence, equipped for evolution. The Incas, however, thought about consciousness as a movement of mindfulness as well as of worry for others too. John Locke, an early philosopher, said that consciousness, and so individuality, are freelanced of all substances. He also detected that there is no reason to believe that consciousness is stuck to any specific body or mind, or that consciousness cannot be transferred from one body or mind to a different one. Karl Marx, another early thinker, denies the mind-body classification and holds that consciousness is jeopardized by the material eventualities of one's settings. William James, an American psychologist, differentiated consciousness to a stream – unbroken and continuous despite several changes and shifts.

While the main center of a lot of the analysis moved to strictly note cable behaviors throughout the primary half of the twentieth century, analysis of human consciousness has grown staggeringly after the 1950s.

In Sigmund Freud's psychoanalytic theory, we can see that he believed that all three levels of awareness- preconscious, conscious, and unconscious were responsible for one's behavior and thinking. He believed that the mind itself was divided into three parts- the id, the ego, and the superego. The Id is present at birth, instinctual, and operates according to the pleasure principle. The ego underseals reality and logic and develops out of the id in infancy. Finally, the superego is an internalization of society's moral standards and responsible for guilt. Now, the Id is regarded as unconscious, whereas the ego and superego are also conscious and preconscious. Freud constantly revised his own clinical qualities researches, however, and didn't conduct scientific experiments and hence his work is heavily scrutinized, leaving the questions unanswered.

Sigmund Freud's theory differed from the other psychologists since his theories were more understandable and very easily conveyed to the people. Sigmund Freud's work and hypotheses helped people shape their perspectives on youth, character, memory, sexuality, and therapy. However, his theories were subject to considerable criticism both now and during his own life. Whilst John Locke and William James took a more practical approach to the mystery by conducting experiments, Sigmund Freud didn't provide any evidence to support his claims.

#### Brain

Today, the essential focal point of consciousness research is on understanding what consciousness implies both biologically and mentally. Issues of interest include phenomena such as perception, blindsight, brainwaves during sleep, and altered states of consciousness produced by psychoactive drugs.

A greater part of the test assesses consciousness by approaching human subjects for a verbal report of their encounters. However, to confirm the criticalness of these verbal reports, researchers must contrast them with the action that all the while happens in the brain –that is, they should search for the neural connections of consciousness.

Hope is to locate that noticeable action in a specific aspect of the brain, or a particular pattern of global brain activity, will be greatly predictive of consciousness mindfulness. A few brain imaging strategies, for example, EEG and MRI scans, have been utilized for physical proportions of brain activities in these examinations. A few investigations have shown that movement in essential primary sensory areas of the brain isn't adequate to create consciousness: it is workable for subjects to report an absence of awareness in any event, when areas, for example, the primary visual cortex show clear electrical reactions to a stimulus. Higher brain areas are viewed as all the more encouraging, particularly the prefrontal cortex, which is involved in a range of high order functions.

One mainstream theory implicates various examples of brain waves in creating various conditions of consciousness. Analysts can record mind waves, or drawings of electrical movement inside the cerebrum, using an electroencephalograph (EEG) and placing electrodes on the scalp. The four types of brain waves (alpha, beta, theta, and delta) each correspond with one mental state (relaxed, alert, lightly asleep, and deeply asleep)

#### Memory

Episodic memory can be regarded as the only form of conscious memory. This is because it is the capacity to consciously remember personally experienced events and situations in the past. The hippocampus located in the brain's temporal lobe is responsible for this type of memory.

Consciousness also plays a part in important memory distinctions. One such distinction is the implicit and explicit characteristics; in which explicit memory is what you consciously know and implicit memory includes events you may not be conscious of.

Furthermore, several empirical findings suggest that declarative memory is related to consciousness as well; meaning that the retrieval and formation of this memory are connected to awareness. Working memory operates/maintains consciously perceived information as well since it temporarily stores and tampers with information whilst working on tasks.

The current ways of testing this information are lacking in several essential aspects, including spatial resolution, temporal resolution, or scope. Examples of such methods are PET, fMRI, EEG, implanted electrodes, etc. PET and fMRI have temporal resolution problems, EEG is well-known to have localizability difficulties, and implanted electrodes whilst great in temporal and spatial resolution can only test a set number of neurons; that is, they are restricted in scope. Hence, huge numbers of our speculations, while testable on a fundamental level, appear to be difficult to test as of now.

#### Mental illness

Consciousness has an influence on the way we see objects around us, which encourages us to settle on choices about how to communicate with them. Experiencing difficulty perceiving objects is connected to a few problems, for example, agnosia (a failure to decipher visual data), Alzheimer's disease, and autism. However, we actually don't comprehend what visual data is basic for the mind to intentionally perceive an object.

Several different disorders of consciousness include locked-in syndrome, minimally conscious state, persistent vegetative state, chronic coma, and brain death.

Locked-in syndrome, otherwise called pseudo coma, is a condition wherein a patient is aware however can't move or impart verbally because of complete loss of motion of essentially all voluntary muscles in the body aside from vertical eye developments and squinting. The individual is conscious and is able to speak with eye movements.

In a minimally conscious state, the patient has intermittent periods of awareness and wakefulness. Patients need to give restricted, however reproducible indications of consciousness of themselves or their current circumstances. This could be following straightforward orders, comprehensible speech, or purposeful conduct.

In a persistent vegetative state, the patient has sleep-wake cycles, but lacks awareness, is not able to communicate, and only displays reflexive and non-purposeful behavior. The term refers to an organic body that is able to grow and develop devoid of intellectual activity or social intercourse

Like coma, chronic coma results generally from cortical or white-matter harm after neuronal or axonal injury, or from central brainstem sores. Usually, the metabolism in the grey matter decreases to 50-70% of the normal range. The patient lies with eyes shut and doesn't know about self or environmental factors.

Brain death is the irreversible end of all brain activity, and function (including involuntary activity necessary to sustain life). The main cause is total necrosis of the cerebral neurons following loss of brain oxygenation. After brain death the patient lacks any sense of awareness; sleep-wake cycles or behavior, and typically looks as if they are dead or are in a deep sleep state.

#### Future predictions and conclusion

As we can see from the history of scholars' endeavors to study consciousness empirically, its nature is not one that can be defined using scientific methods. In the past, psychologists such as Descartes came up with dualistic theories that did not line up with the fundamental laws of physics. In the battle between realists and illusionists, taking sides is fundamentally impossible as the topic doesn't allow for concrete evidence.

As we can observe from neural examinations of the brain to detect the causes of consciousness, there is no sensory sector of the brain that is the cause for one to be aware during a certain event even if there are clear signs of a reaction to a stimulus. Similarly, even though consciousness plays a major role in memory, we currently lack the facilities to research it fully. In the future, there is a possibility that we will be able to access such facilities, however, which could allow us to find the neural connections and its ties to mental illness as well. Not only would this help several people by making us aware of the causes of our perspective on certain things, but it would also give us a better chance of recognizing signs of possible mental illness or other issues beforehand.

As it seems, researchers continue to study this unknown part of our mind and once we are able to fund and recover from the global pandemic, we will be able to answer one of psychology's most difficult questions.

Blackcoffer Insights 21: Amara Arora and Vaanya Kaushal, Scottish High International School

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By Ajay Bidyarthi - October 22, 2020 7006

an. Though in this 21st-century building Space shuttle and exploring space has become an obvious activity among the human race, now with the inclusion of Start-ups like Space X once dreamed for reaching out at space now is coming true. We all have to agree upon a fact that in the Growth of industrialization we have generated a humanous carbon footprint and colonize at outer space will create a much-needed area for our survival. With time the human race has visualized and has undergone many transformations, and these transformations may for starters were not that effective but were a major role at existence to this age. Be it a natural transformation like shifting of tectonic plates or manmade like Dumping water and damaging water bodies, somehow have affected usual life of humans so creating space of humans is what next humans are eyeing for.

All this idea for Colonizing in outer space emerged when NASA was able to launch a space shuttle with a heavy payload in the late 1990s this idea didn't stir brain at that time but later was like apple eyes when various articles from astronauts and their writeup came into limelight and this idea saw its progression, space exploration was not a new normal, companies were petrified by the number of investments that these kinds of projects ask for. But things change with the entry of PayPal's owner Elon Musk, in 2002 where he laid stones of Space X, with NASA providing the launchpad for their exploration.

Being space travel legitimate there where many bottlenecks knowing the nature of outer space will boost the idea of colonizing, here one has to realize the optimum. But the main target that these company put forward with themselves was to not just get into other planet but to get back at earth safely, earlier these projects due to high fund was always subdued and priority was given to the rocket technology. Thus, this unimaginable quest for the search of space was far-fetched though.

Now being in 2020 we do not find it out of a place of colonizing outside of space, the kind of emergence of technologies has led to the escalation of spreading the roots of human existence, the plan for reaching out to outer space too plays a key role for this idea too. Proper Planning, Analysing, Organising, and Executing were required for these projects to be successful for deeper know how I would like to mention here an example of Space X, According to them they wud be successful for sending Rockets by 2022 and would able to colonize by 2050, For achieving these vision they have planned a total of 36 times pre-launch of the same rocket which they will be launching by 2020. Not only that they have already placed their star link satellites which will provide the basic network connectivity for their colonized world, they have planned this to that extent that they have targeted a profit of \$ 22 billion yearly by 2025. Already they have sent the first manned rocket successfully what Elon musk plan is to create that infrastructure by which going to Mars with cost as a regular air flight ticket all this will lead to better chances for colonizing at another planet. With setting up their commercial flight once started to the red planet it wud just be a stepping stone for the colonizing at the outer space.

But the fundamental change that people have to undergo while living on another planet will be a change in gravity and being able to be near to live support if any technical issues arise to their suit until unless we find a similar place like the earth that is the change which humans have to adjust. Aspects like Ultraviolet rays too will play an immense role in the survival, but with the rate of technology expanding and challenging at very boundaries there are not many days left when we find solutions to these aspects but this idea of colonizing has more to do with monetary terms it has been projected that building a colony at space will cost at about \$10 Trillion which is more than many countries GDP. Placing that much of an amount and getting funding for such highly anticipated projects is tough. Elon to have addressed with these questions with an open Door he believes that this cost is nothing when we find a route to colonize space and these costs will be justifiable when space exploration will reach new heights.

Also, our world is around water and the percentage of land comparison to water is too less. Whereas the population is increasing with the speed and the level of excitement in order to search for new things and the obsession with the new and innovative things never going to finish. Because in the end, we do not satisfy what we have achieved, we are only looking for other things and crave to achieve that.

In order to achieve that planning is most crucial stage. As of now we have searched 9 planets but still didn't shortlisted the outcomes. But according to the 3-decade theory of ELON MUSK, it seems to be possible.

As the most important thing to survive is the atmospheric environment, whether is this suitable or not, and in order to make it suitable what steps had to take and maintain the suitable level of oxygen. The missions are now what everyone is focusing about. Finding the source of water, because its 2nd crucial thing which is needed to survive.

Apart from the excitement and the things, the threats or the uncertainties are bound to happen like any kind of mammal which could occur during construction or after that. So the security for that or any protection so that uncertainties could be replicated.

After the basic things, other factors like what are the natural habitats available there, whether the plants could be grown over there or not. If yes, then what types of plants could survive there.

The environment for the animals is safe or not. Because to balance the nature we need all types of animals, natural habitat, even insects and other small things which seems to be ignorable but plays an important role in maintaining the environmental balance. For e.g. – Ants are among the leading predators of other insects, helping to keep pest populations low. Ants move approximately the same amount of soil as earthworms, loosening the soil in the process and increasing air and water movement into the ground. They keep the ecosystem clean of dead insect carcasses and aid in the destruction and decomposition of plant and animal matter. So, every small thing contributes in its own way.

Another matter of concern is the level of artificial intelligence and machine learning required to maintain that kind of requirement. Because as the current scenario, we need energy to run any vehicle or even for the robots. So, the availability of the energy and the source of energy is needed.

And apart from this, the heat of sun is equally important in order to maintain the level. Because with artificial air we can survive but not for so long. So, in order to remain healthy as well the calculation has to be done. When thinking about disease, you may have heard in the news about the concern that antibiotics (such as penicillin) – which help fight infections – may eventually stop working. Global health organisations are trying to reduce the use of antibiotics, especially for conditions that aren't serious. This is because their overuse in recent years means that they're becoming less effective.

But still we can survive without antibiotics. Because there are ways of dealing with diseases caused by bacteria such as isolation which is how they were treated before penicillin.

It might sound like something set firmly in the realm of fantasy, but experts in private industry and governments around the world are trying to understand how feasible it would be to establish a lunar base. Some scientists think humans could survive comfortably on the moon. In some ways, the very minimal gravity of the moon might actually be more conducive to life than the microgravity astronauts experience on the International Space Station.

Although it hasn't been formally tested, some experts hypothesize that the small amount of gravitational force put on an astronaut's body when on the moon could help stem some of the adverse effects like bone-density and muscle loss that space flyers experience while living in microgravity on the International Space Station. By using the moon's indigenous material, space agencies can save money on the cost of flying pricey missions to and from the moon's surface. Once on the moon, instead of having to stage costly missions aimed at delivering oxygen and other necessary resources from Earth, experts might be able to actually use the material to manufacture gasses needed to sustain life on the satellite.

On earth, we are protected from radioactive solar winds and cosmic rays by our own magnet field known as the magnetosphere. But out in the space, we can't rely on this type of protection, and in order to make that protection, it could take a lot but yes with more upgraded technology it could achieve.

Although till now the approximate value of the project is \$10 trillion. But the aim is to make the fare equivalent to the normal air fare.

As once we are comfortable with all the resources, securities for uncertainties, risk analysis, and the probability of survival of the human being and many other factors after consideration, then development won't take much time.

Because to construct a building it takes normally 8-9 months. Which is totally acceptable.

But the main concern is the density of the land, i.e. whether the land has the capacity to bear that much weight or not. And the type of land is adaptable for cultivation or not. Although land can be converted into different types of cultivation but with the help of upgraded technology.

In order to transport the equipments on the regular basis, a large amount of fuel is required, and other factors as well and built the propellant depots for rocket landing buildings various infrastructure for the city one by one will create a way forward for idea of Colonizing at outer space.

Blackcoffin Insights 21: Anubhav Sasseendran and Shivay Agarwal, NEW DELHI INSTITUTE OF MANAGEMENT.

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By Ajay Bidyarth - October 22, 2020 7436

We've really done it this year. Like an insatiable glutton, the law of averages has come home to roost. We should've taken the hint when on the 1st of January, 66 people lost their lives in the Jakarta floods. What followed was like the highlights reel of a disaster movie franchise – a volcanic eruption in The Philippines, irresponsible bushfires in Australia, earthquakes in Russia, Iran, Turkey, India, and China. And speaking of China. 2020 has brought home the fragile mortality of the human race into sharp focus. As global Covid-19 deaths stoutly push past the grim 1 million marks, we have no choice but to question our place in the universe – are we the all-conquering masters of our domain, or mere tourists in a ruthlessly apathetic ecosystem? Is the human race on the ubiquitous three-part literary arc that defines every story, every life, every civilization – ascent, ape

x, and descent? Maybe when Michael Jackson unveiled his moonwalk in 1983, or when Barack Obama stepped into the White House as President of the United States in 2008, or indeed when MS Dhoni lifted the Cricket World Cup in 2011, we peaked, as a species, and everything since then has been a steady unraveling. 500 years is a long time. For context, the world population in 1500 AD was a mere 461 million. The 16-fold explosion since then is unprecedented in history, but we might just be at the tip of an iceberg. Though fertility rates are dropping and more and more people are foregoing the chance to have babies, we might just have crossed the threshold – the population projections for the year 2050 is 9.8 billion, and for 2100 is a whopping 11.2 billion<sup>1</sup>. Somewhere out there, Malthus is cackling in his grave. The year 2500 suddenly seems a long way off, and this conversation seems ever-more pertinent today. The Bulletin of Atomic Scientists is not optimistic – the famed Doomsday Clock they maintain is the closest to ‘midnight’ (our proximity to global catastrophe), since its inception in 1947. Global warming? Check. The threat of nuclear war? Check. Ongoing pandemic? Check, check, check.

And yet, hope floats, for three reasons. Mankind may just have its back to the wall right now, but there are three shoots of potential that might just help us make it to 2500 AD – the advent of a basket of disruptive technologies (artificial intelligence, bio-enhancement, genetic engineering), the private sector focus on space exploration and terraforming, and good old fashioned human resilience. While the first two factors will no doubt be critical to human survival, it is the third one that we must pin our hopes on – our long-demonstrated history of surviving whatever nature, the universe, or our own self-destructive tendency, throws our way.

#### The Next Superman?

In the 13th century, in the Italian town of Pisa, an enterprising tinkerer developed the first eyeglasses, for a local friar with weakening eyesight<sup>2</sup>. All of a sudden, there existed an external device that could amplify our senses, a tool that gave us an advantage in survival. Today, LASIK surgeries obviate the need for eyeglasses entirely. Hearing aids give the gift of auditory perception back to those who had gotten used to a world of muffled voices and unheard sounds. The iPhone routinely comes with an augmented reality tool that allows us to measure the length of objects in front of us.

But the real science starts where the imagination ends – augmented reality glasses, smart wearables, and virtual reality tools will be ubiquitous in the next few decades. But what after that? Science has the answer, and it’s both thrilling and scary. Artificial intelligence has become the stuff of fable, the filler for all questions left unanswered. But AI, combined with bio-enhancement and genetic engineering, might just lead to the evolution of what some are calling Homo nouveau<sup>3</sup>. Homo nouveau will be smarter, faster, more agile, and better equipped to adapt to what promises to be a world that is VUCA beyond our imaginations. What might such a human being look like?

They might have a small chip embedded in their brain that utilizes artificial intelligence for enhanced sensory perception. What does that mean? It means that they would be able to see better, focuses their attention for longer, hears what they want to hear, and communicate the appropriate reaction to the rest of the body. Through a chemical in the blood, this AI chip would be able to demand the appropriate response from the body. Bio-augmentation of limbs and organs, internal and external, would mean that what a person can or cannot do is no longer determined at birth, but can simply be bought. All of a sudden, the average Joe can run faster than Usain Bolt, swim better than Michael Phelps, and...fly? Maybe. Genetic engineering will be the missing link. Already there are feverish conversations about a dystopian future featuring designer babies and a digital divide that simply cannot be overcome because it is inbuilt into one’s DNA. The breakthrough with CRISPR-Cas9 might just be the key to unlock the mysteries of DNA manipulation. So what if there’s no food left? Our body AI will adjust our appetite accordingly. No water? Absorb humidity from the air through specialized pores in the skin. The human being in 2500 AD may not be how we recognize one today. That may be our only shot.

#### Galactic Dominance

SpaceX, led by its mercurial leader Elon Musk, has been the leader here. The SpaceX Mars Programme is based on a very simple premise – as the earth’s closest planet in terms of distance and terrestrial conditions, Mars would be our best bet for colonization. Musk has invested billions of dollars in the Mars Space Programme and remains a fervent believer in the concept. And among tech visionaries, Musk is not alone. Jeff Bezos, the richest man in the world, owns Blue Origin, which simply aims to make spaceflight cheaper through incremental technological growth. Bezos, who took an online retailer of books and turned it into an ever-expanding behemoth, is not a man who thinks small. With more and more business leaders finding spaceflight and planetary colonization a tantalizing prospect, there will inevitably be a concerted push to developing an actual colony on another planet. And when the pull-factor to this development starts hitting diminishing returns, there will be the inevitable push factor as global warming and the possible increase in the eruption of pandemics begin to take their toll. It might just become a more feasible option for people to find an alternate home, if not on Mars, then on one of Saturn’s moons.

A human colony on Mars sounds like a concept straight out of science fiction, but so did a permanent station in Antarctica until a few decades ago. Mount Everest seemed like an unapproachable summit until someone went ahead and planted a flag at the peak. Today, hundreds of people every year attempt the climb. As spaceflight becomes more reasonable, as the urge to explore supersedes the inertia of investment, we become closer to our best chance of survival – leaving planet earth behind and finding another home, perhaps one more forgiving of our follies.

#### The Human Spirit

The introduction to this article includes an illustrative list of disasters and misfortunes that have struck the global community this year. And yet, we survive. Businesses surge ahead, people adapt to a world of masks and social distancing, the world goes on. Earthquakes, tsunamis, pandemics, we’ve seen them all before and survived, and the human race, in its intrepid exploration of the world, pushes onward and upward. Technological visionaries envision a future that the rest of us cannot see, and then invest money in their vision. Gradually, what seemed unthinkable suddenly becomes real – the moon landing is the best possible example of that. Google launched Google Glass as the first augmented reality wearable technology, and suddenly we could foresee a future with smart eyewear. While the product didn’t quite catch on, that doesn’t mean other companies aren’t trying. Bio-augmentation is already a fast-developing industry, while CRISPR-Cas9, the “genetic scissors” is being held back only by regulatory bottlenecks. How long before the prospect of fiddling with the gene code becomes not a luxury but a necessity? The human spirit, the tendency to survive and thrive at all costs, will eventually win.

The human race will survive to 2500, of that there is no doubt. The real question is, will the person who exists in 2500, with bionic chips and a bio-enhanced body structure and a modified genetic code, be called a Homo sapien? Or is Homo nouveau the way forward?

Blackcoffer Insights 21: Ayush Kumar, XLRI Jamshedpur

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By Ajay Bidyarth - September 22, 2020 7103

Mr. Sakamoto is a bonsai artist, lives downtown Kyoto, Japan. Bonsai is a Japanese art form that is the cultivation of small trees in a small or medium container. He is in this field of business for the last ten years and he loves what he does on a daily basis. People from different cities in Japan, come to buy his artwork. But, in the early stage of his business, he was just another regular Bonsai artist. His popularity has increased because of the stories he tells for every art he is selling. His customer immediately loved him for this while buying A Bonsai art. He loved to sell his customer with his artwork and a story related to that product which resurrects his presence through his art in customers. Soon enough his business thrived and nowadays he is always busy. After the digital revolution, although his sales increased, he was not happy. He was not satisfied. Something is eating up his mind day by day. He could not understand what's the reason behind his remorse. A chatbot is an awesome invention of the digital revolution. It is the real-life embodiment of Customer Engagement. Every business needs this feature- will be an understatement. Because Customer engagement is the base of a business. The chatbot does the exact thing digitally. It helps customers to answer the queries and tell about the product that the business has to offer is a fully automated way with vibrant customizations.

Mr. Sakamoto is running his business for the last fifteen years now. And now he is happy that he was not for the past couple of years. The rationale behind his happiness is the chatbot. Though he has a website and app to sell his Bonsai art, he could not engage with the customers in the way he wanted to. He has trained his employees and apprentices, but they are not providing the same service in the way he does. He was unsatisfied and the chatbot relieves him from his sadness. He has done all that at affordable prices in no time. Let's understand the Mr. Sakamoto's "Mondai Nai"- perspective about why chatbot is the answer of his problems.

#### Building the Trust with Customers

This is the fundamental and root cause for which Mr. Sakamoto has to implement the chatbot in the first place. His stories are embedded with each art. The product which he sells needs this story to be with it. His stories which were not been told to all the customers before are now sharing with this chatbot and building the trust between them. We all can agree on this one statement that trust is the most impactful aspect, maybe the best of aspects, in the relation between any customer and business-owner, whether the business is small, medium, or large.

#### Target the Millennial Customer

Millennials, a word that was not introduced before 1990. The generation which is stuck in between Gen-x and Gen-y. A generation of people accustomed to both digitization and old culture. They are the most targeted audience

in this era. What else would be more approachable to this generation than a chatbot? It's easy, less time consuming to use. Mr. Sakamoto is now one of the few Gen-x persons who can do business with the millennial so easily.

#### Better Human Interactions

Mr. Sakamoto has some employees and apprentices. He has trained them as per his needs. But there is a limit. They can't deliver the exact things that he can or the way he does. Neither chatbot can do that exactly, it will accurately follow the instructions. Not only the chatbot solve the queries of the customer in his way, but also give a recommendation to the product in the way he wants too. Is there any more attribute he would care about that? Absolutely no!

#### 24\*7 Service

The most expensive thing for any businessman is the return of their customer with an empty hand because of his unavailability. A chatbot is a perfect way to solve it. For Mr. Sakamoto's customized chatbot is not only present for customers in their availability, but also It was giving the response to the customer in all the time zone, all over the world. Mr. Sakamoto wouldn't be happier for this feature.

#### Scaling Up Business in Globalization

In the era of globalization, what is more, helpful than a chatbot? It can be customized in any language. It can be accessed by any human being residing in any part of the world. And at the end of the day, when that foreigner is happy with the buy and the felicitation and says "Arigato" but in his own language, at that moment he feels so warm and happy.

Handling a lot of customers is really hard. He assigned employees, but the rate is growing fast. So, in the competition of the market, Mr. Sakamoto took the help of a chatbot. Now this automated customized application is handling a greater number of customers than his employees can do. His business is growing exponentially.

Now, when you found out why Mr. Sakamoto is happy and his business is growing in this competitive industry then, do you still have a question in mind that why does your business need a chatbot?

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By Ajay Bidyarth - September 22, 2020 6955

Have you ever wondered what's common between Sir Alex Ferguson, Pep Guardiola, and Jose Mourinho? I know it might look a lame question, especially to the ardent football followers. At first instinct, the answer is that they are regarded as the top managers in the football universe. #UCLwinners. But when given a closer look, these managers, weren't that great when it came to their careers as football players. Any naive observer can build a fallacy of causation and correlation that those who don't have a great career as a football player will go on to become a great football manager. But is this restricted just to football? Mike Brearley, one of the greatest captains in the history of cricket and the author of the book the art of captaincy, wasn't the prolific batsman of his time. Our former President, A P J Abdul Kalam didn't have a political background, but was still appointed as the president of our country and went to become one of the finest presidents our country has ever had. So, can it be stated with confidence that great leaders need not be the expert in their respective fields? Let's understand the leadership role, types of leaders, and explore a few more perspectives before we arrive at a conclusion.

Let's start by first understanding what or who is a leader. A leader is not a position or a designation. It's a virtue if employed correctly. From a janitor to the CEO, from a student to a researcher, from a content writer to a philosopher everybody is a leader. (#leadersareeverywhere) So, what are the virtues of a leader? One of the famous personality trait theories, the Big 5 personality trait theory is always linked closely with leadership. As per the various researches, the personality traits of extraversion, openness, and conscientiousness are associated with leaders more often than the other two traits. Not just these humble and empathetic are also considered as the adjectives that are frequently associated with leaders. But nowhere is technical expertise related to a leader. #NOTSOTECHNICAL

As stated by Colin Powell Leadership is the art of accomplishing more than the science of management says is possible. #It'sART If leadership is an art and leaders are the artists then more or less the leaders can be viewed as directors of the films who are organizing, arranging, managing, and directing the scenes. Another analogy for that can be the orchestra where the conductor is using the baton/stick to set the rhythm of the band. So, is it necessary for the conductor to himself or herself by a great violinist? No. When it comes to the corporate sector the leader need not be an expert on the technology but should know how the technology functions so that he/she can utilize it in the best possible way. They can allocate the task of building technology to the right technical experts. And how do the leaders identify the right person for that job? Or how do leaders know what qualities to look for in a person? #Experience. Every great leader once started off as one of the frontline workers or at the bottom of the pyramid in the hierarchical structure. Even though they might not have had the technical expertise in their respective fields, their visionary outlook, their management skills, and the experience they gathered helped them in achieving their targets. Leaders can always take the assistance of the subject matter experts to guide them in situations of technical difficulties. As per the great man, situational and trait theory of leadership, leadership is innate to the person. Leadership though can be conditioned or can be brought out in a person by rewarding him, great leaders show unconditional attachment towards their vision. Everyone knows how to read a map, but which path to choose isn't something that can be taught. Leaders give the direction or vision to the company and drive it closer to the target that the company wants to achieve. Leadership theories don't focus on the technical knowledge of the leaders, but rather more on people skills, their approach towards a problem, and how well they guide and hire others to get the job done, which is also evident as per the managerial skills required as per Robert Katz.

Though it can be argued that technical experts are also the great leaders in their areas, but these leaders are generally at the middle management level. As per the different leadership styles, a servant leader is the one who always tries to achieve the goal of the team. These leaders are the ones who have a management objective laid out in front of them and they drive the team closer to achieving the target by having the people-first mindset, a collaborative approach towards solving the problem. These are the people or the leaders needed at the execution level of the project or those who are too close to the employees at the bottom-most level. Since the managers at the top of the pyramid don't get much time to invest in people they appoint the right people on their behalf to get the job done.

Consider an IT firm. So as per the points mentioned above, does it mean that a leader or the manager shouldn't know how to code? Depends. If the person is the first line manager then he or she should probably know how to code so that he or she can help the team in achieving the target of producing less garbage which might be one of the project's KPIs. The project manager, who might be an operations manager, (#MBA) from an IT background, probably need not know what line of code is to be written but should know the algorithms or the logic behind the code so that he or she can validate the code from the client's perspective. The CEO, might not be from an IT background but should know how to run an IT firm rather than the syntax of the code.

But in today's competitive world leaders can't be one dimensional. They need to have expertise in multiple areas to be at the top. Mike Brearley if got a chance to play a T20 match, won't even get picked into aside, not because of his age, but because of his not so great looking batting statistics(#Thegamehaschanged). His leadership skills won't be enough to get him into the squad. But he can be a great leader if selected to coach the top 15 captains in the world today. As we have already discussed the film directors, their job isn't to teach the cameramen on how to set up or operate (lens settings, etc) the camera. Their job is to guide the cameramen on what angle it should be held and how he or she should coordinate with the lights crew so that a perfect shot is captured. So even if a leader may not be a technical expert of his field, but if he or she has the right approach and mindset, understands the system and its process, then he or she can hire the best talent for the job and can get the work done by guiding the talent, with his or her vision.

So, the answer to the question, which we came across in the first paragraph, is yes and no. Depending upon the position in the hierarchy (yes for a front-line manager and no for a CXO) and the type of the leader you are, the level of technical expertise needed varies. Though as stated earlier by Robert Katz, the CXO's need to have the least amount of technical expertise, the CXO should know how the technology functions or what are the applications. What processes are to be followed to build the technology. He or she should now what is to be done rather than how it is to be done, (#itsnothowitswhat). Otherwise, even though the company might be sitting on a gold mine but If the leader isn't aware of that or isn't learned enough to know what to do with it, no company can succeed even with having all the resources at their disposal. Leaders command respect and don't demand it and that's possible when they give value to their front-line employees, seek timely advice from the technical experts, and put the resources to the best of its uses. Otherwise, you will be surrounded by technical experts like Dilberts. (#dilbert)

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By Ajay Bidyarth - September 22, 2020 7118

The word “leadership” can bring to mind a variety of images. For example, A political leader, pursuing a passionate, personal cause or An executive, developing his/her company’s strategy to beat the competition. Leaders help themselves and others to do the right things. They set direction, build an inspiring vision, and create something new. Leadership is about mapping out where you need to go to “win” as a team or an organization; and it is dynamic, exciting, and inspiring.

In my point of view we cannot become a good leader without technical expertise because every task in the organization it's required a lot of skills, knowledge, consistent, enthusiastic, patience, motivating, inspiring, industrious, and critical thinking on the basis of the field we are doing. A leader should have the ability to motivate self and others, effective oral and written communication, critical thinking skills at the working team and delegating a task. Good leaders do have these abilities and if we wanted to create a future leader. They need to take in a large volume of information and to take the essential elements that define the core problem to solve. They need to organize a team to solve these problems and to communicate to a group, they need to establish trust with a group and use the trust to allow the team to accomplish the work more than it could be done alone. Though all these skills we have but it's would not sufficient to make us a great leader because to excel and utilize these abilities in practice we need a lot of technical expertise in a particular domain. For example , Like in a hospital if the head of the hospital is lead by other people rather than Doctor then the hospital would become worse at a point because the person from other fields he could not lead and understand the real scenario and mechanism that the hospital is functioning and he would not understand the staff and the patient as well. Hence, to lead the hospital Doctor is deserved who knows his own field how to lead and understand the real scenario of it. That's why being a leader requires technical expertise to have great knowledge and understanding about his own organization. Every person if they want to become a leader they should have technical expertise on their own organization so that their organization would run smoothly, hence nobody could run other organization if we do not have the technical expertise on that field.

So, be a leader, not a boss which makes your life much better, as they're a saying that “ A good objective of leadership is to help those who are doing poorly to do well and to help those who are doing well to do even better.”

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By Ajay Bidyarth - August 23, 2020 7350

When we talk about AI, different people have different perspectives about it. There is one group of people, having good knowledge about the real potential of AI, who believe that AI can be a novel solution to many problems that the world is facing today. There is another group of people who are merely threatened by the thought of AI taking over the world.

The field of AI took birth when Alan Turing in 1950 had this thought “Can machines think?”. Later in the 1980s, with the adoption of “expert systems” by the companies around the world, the booming of the field of AI was initiated. Initially, it was a matter of awe for everyone to see the results of what AI can achieve. AI’s growth in the past few decades has been exponential and it has transformed the way we live, work and solve challenges. AI has made its impact in a wide variety of areas including healthcare, education, business and many more. But, one of the areas of highest impact that AI has made recently is in the environment and climate change.

Is AI Revolutionizing the way we deal with Environment and Climate Change?

AI can strengthen climate predictions, enable smarter decision-making for decarbonising industries from building to transport, and work out how to allocate renewable energy. In recent years, AI has been a game-changer in how many people, as well as organizations, deal with climate change. Microsoft believes that artificial intelligence, often encompassing machine learning and deep learning, is a “game-changer” for climate change and environmental issues. The company’s ‘AI for Earth’ program has committed \$50 million over five years to create and test new applications for AI.

AI is increasingly used to manage the intermittency of renewable energy so that more can be incorporated into the grid; it can handle power fluctuations and improve energy storage as well. Wind companies are using AI to get each turbine’s propeller to produce more electricity per rotation by incorporating real-time weather and oper

ational data.

AI can also improve energy efficiency on the city scale by incorporating data from smart meters and the Internet of Things (the internet of computing devices that are embedded in everyday objects, enabling them to send and receive data) to forecast energy demand. Besides, artificial intelligence systems can simulate potential zoning laws, building ordinances, and flood plains to help with urban planning and disaster preparedness. One vision for a sustainable city is to create an "urban dashboard" consisting of real-time data on energy and water use and availability, traffic and weather to make cities more energy-efficient and livable.

Hotter temperatures will have significant impacts on agriculture as well. Data from sensors in the field that monitor crop moisture, soil composition and temperature help AI improve production and know when crops need watering. Incorporating this information with that from drones, which are also used to monitor conditions, can help increasingly automatic AI systems know the best times to plant, spray and harvest crops, and when to head off diseases and other problems. This will result in increased efficiency, enhanced yields, and lower use of water, fertilizer and pesticides.

But, is AI as good as it looks or does it have a downside?

When we talk about the effect of AI in the environment and climate, both sides of the coin must be elucidated. So, apart from all the positives discussed above, the usage of AI also has a downside.

Last year's World Economic Forum report showed that while AI can address some of Earth's environmental challenges, it is important to manage it properly. According to the forum and experts in the field, AI has the potential to accelerate environmental degradation. The use of power-intensive GPUs to run machine learning training has already been cited as contributing to increased CO<sub>2</sub> emissions.

Although AI has been around for about half a century, the question of environmental impact – and other ethical issues – is only arising now because the techniques developed over decades can now be used in combination with an explosion in data and strong computational power.

For all the advances enabled by artificial intelligence, from speech recognition to self-driving cars, AI systems consume a lot of power and can generate high volumes of climate-changing carbon emissions.

A study last year found that training an off-the-shelf AI language-processing system produced 1,400 pounds of emissions – about the amount produced by flying one person roundtrip between New York and San Francisco. But there are ways to make machine learning cleaner and greener, a movement that has been called "Green AI." Some algorithms are less power-hungry than others, for example, and many training sessions can be moved to remote locations that get most of their power from renewable sources.

The key, however, is for AI developers and companies to know how much their machine learning experiments are spending and how much those volumes could be reduced.

What can be done?

To prevent this, the proposition by the World Economic Forum report is that advancements in "safe" AI should be pursued, to ensure that humanity is not developing AI that is harmful to the environment. Specifically, the World Economic Forum said in its report that AI developers "must incorporate the health of the natural environment as a fundamental dimension." This means safeguarding against models that will demand the consumption of energy or natural resources beyond what is sustainable, among other factors. In a sense, all programs need to be designed with the dimension of environmental protection and improvement in mind.

In the future development of AI programs, it will also be important to note the environmental impact of creating these systems in the first place. According to an academic study on energy usage for deep learning processes, the creation of an effective AI might be costly to the environment. Nearly 300,000 kilograms of carbon dioxide equivalent emissions are created during the process of training a single model. This is basically equal to the emissions of five average cars in the United States. Considering the negative environmental impact in addition to the positive implications of AI and climate change will be crucial, moving forward.

There is always room for improvement, some pioneers of machine learning recently published a paper called Tackling Climate Change with Machine Learning was discussed at a major AI conference. David Rolnick, a postdoctoral fellow of the University of Pennsylvania said "call to arms" which means to bring researchers together.

This paper covers thirteen areas of research where machine learning can be used, including energy production, CO<sub>2</sub> removal, education, solar geoengineering, finance and many more. The main idea is to build more energy-efficient buildings, creating new low-carbon materials, high tech monitoring of deforestation and greener transportation sources. Artificial intelligence and machine learning can be a medium but the real work is to be done by us as a caretaker of mother earth.

How about better forecasting of climate change?

The kick start was already done by climate informatics in 2011 which regulates the collaboration of data science and climate science. It covers a wide range of topics like improving prediction of extreme events such as hurricanes, paleoclimatology, collecting data from ice cores, climate up-down scaling and its impact on us.

"There's a lot of uncertainty," Monteleoni

Claire Monteleoni, a computer science professor at the University of Colorado concludes that AI/ ML models generally forecast for the short-term. There is a significant difference when it comes to long-term forecasting. The first system was developed at Princeton in the 1960s. All the AI/ ML models developed till now revolve around atmosphere, oceans, land, cryosphere or ice. AI can help to achieve new heights with the amount of data collected at this point of time, and compute more complex climate conditions using climate modeling algorithms.

What about showing the effects of extreme weather?

We all know that climate change is real and the rise in atmospheric temperature the proof, but to make it more realistic, Montreal Institute of Learning Algorithms (MILA), Microsoft and ConscientAI Labs uses Generative Adversarial Networks popularly known as GANs to simulate what mother earth will look like with the rising sea levels, atmospheric temperature, air pollution and intensive storms.

"Our goal is not to convince people climate change is real, it's to get people who do believe it is real to do more about that," said Victor Schmidt, a co-author of the paper and Ph.D. candidate at MILA

The project is deployed for the people to look at what their places will look like in the future when there will be a significant climate change.

Can we track carbon emissions?

Short answer, yes. Tracking of carbon emission is one of the agendas of the UN. For this year 2020, the UN's goal is to prevent new coal plants from being built. Satellite images come into picture using deep learning techniques, data science researchers can analyze these high quality satellite images and track the emission. Google is expanding its horizon of nonprofit's satellite imagery, including gas-powered plants emissions which can be used by researchers to track the pollution. There are countries organizations which govern CO<sub>2</sub> emission on the ground level but these data are unreachable by global monitoring associations.

AI can automate the analysis of images of power plants to get regular updates on emissions. It also introduces new ways to measure a plant's impact, by crunching numbers of nearby infrastructure and electricity use. That's beneficial for gas-powered plants that don't have the easy-to-measure plumes that coal-powered plants have.

Blackcoffer Insights 19: Shivendra Agarwal & Teena Mary (CHRIST University, Bangalore)

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By Ajay Bidyarth - August 23, 2020 6800

No one can reduce mistakes to zero, but you can learn to harness your drive to prevent them and channel it into better decision making. Use these tips to become a more effective worrier.

Don't be afraid or ashamed of your fear.

Our culture glorifies fearlessness. The traditional image of a leader is one who is smart, tough, and unafraid. But fear, like any emotion, has an evolutionary purpose and upside. Your concern about making mistakes is there to remind you that we're in a challenging situation. A cautious leader has value. This is especially true in times like these. So don't get caught up in ruminating: "I shouldn't be so fearful."

Don't be ashamed or afraid of your fear of making mistakes and don't interpret it as evidence that you're an indecisive leader, or not bold, not visionary. If you have a natural tendency to be prevention-focused, channel it to be bold and visionary! (If you struggle to believe this, identify leaders who have done just that by figuring out how to prevent disasters.)

Use emotional agility skills.

Fear of mistakes can paralyze people. Emotional agility skills are an antidote to this paralysis. This process starts with labeling your thoughts and feelings, such as "I feel anxious I'm not going to be able to control my customers enough to keep my staff safe." Stating your fears out loud helps diffuse them. It's like turning the light on in a dark room. Next comes accepting reality. For example, "I understand that people will not always behave in ideal ways." List off every truth you need to accept. Then comes acting your values. Let's say one of your highest values is conscientiousness. How might that value apply in this situation? For example, it might involve making sure your employees all have masks that fit them well or feel comfortable airing any grievances they have. Identify your five most important values related to decision-making in a crisis. Then ask yourself how each of those is relevant to the important choices you face.

Repeat this process for each of your fears. It will help you tolerate the fact that we sometimes need to act when the course of action isn't clear and avoid the common anxiety trap whereby people try to reduce uncertainty to zero.

Focus on your processes.

Worrying can help you make better decisions if you do it effectively. Most people don't. When you worry, it should be solutions-focused, not just perseverating on the presence of a threat. Direct your worry towards behaviors that will realistically reduce the chances of failure.

We can control systems, not outcomes. What are your systems and processes for avoiding making mistakes? Direct your worries into answering questions like these: Is the data you're relying on reliable? What are the limitations of it? How do your systems help prevent groupthink? What procedures do you have in place to help you see your blind spots? How do you ensure that you hear valuable perspectives from underrepresented stakeholders? What are your processes for being alerted to a problem quickly and rectifying it if a decision has unexpected consequences?

#### Broaden your thinking.

When we're scared of making a mistake, our thinking can narrow around that particular scenario. Imagine you're out walking at night. You're worried about tripping, so you keep looking down at your feet. Next thing you know you've walked into a lamp post. Or, imagine the person who is scared of flying. They drive everywhere, even though driving is objectively more dangerous. When you open the aperture, it can help you see your greatest fears in the broader context of all the other threats out there. This can help you get a better perspective on what you fear the most.

It might seem illogical that you could reduce your fear of making a mistake by thinking about other negative outcomes. But this strategy can help kick you into problem-solving mode and lessen the mental grip a particular fear has on you. A leader might be so highly focused on minimizing or optimizing for one particular thing, they don't realize that other people care most about something else. Find out what other people's priorities are.

#### Recognize the value of leisure.

Fear grabs us. It makes it difficult to direct our attention away. This is how it is designed to work so that we don't ignore threats. Some people react to fear with extreme hypervigilance. They want to be on guard, at their command post, at all times. This might manifest as behavior like staying up all night to work.

That type of adrenalin-fueled behavior can have short-term value, but it can also be myopic. A different approach can be more useful for bigger picture thinking. We need leisure (and sleep!) to step back, integrate the threads of our thinking, see blindspots, and think creatively. Get some silent time. Although much maligned, a game of golf might be exactly what you need to think about tough problems holistically.

#### Detach from judgment-clouding noise.

As mentioned, when people are fearful they can go into always-on monitoring mode. You may have the urge to constantly look at what everyone else is doing, to always be on social media, or check data too frequently. This can result in information overload. Your mind can become so overwhelmed that you start to feel cloudy or shut down. Recognize if you're doing this and limit over-monitoring or over checking. Avoid panicked, frenzied behavior.

On its own, being afraid of making mistakes doesn't make you more or less likely to make good decisions. If you worry excessively in a way that focuses only on how bad the experience of stress and uncertainty feels, you might make do or say the wrong things. However, if you understand how anxiety works at a cognitive level, you can use it to motivate careful but bold and well-reasoned choices.

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What's perfection really? Does every person expect perfection from oneself or someone else? Or is it in certain amounts? Many times the certain question comes to the mind when we think about what we deem perfect. But how do we verify it?

Let us understand this through the work of three individuals who know are to be put on a task in carpentry on a budget. All are given Rs. 5000 (Assumed) to complete this task. They can't go beyond this budget.

Manish, Vinay, and Sameer need to make a stool for themselves each. Manish has no understanding of carpentry; he learns from YouTube. Vinay took his carpentry lessons during engineering, so he has a practical idea of how to make a stool. But Sameer is a Carpenter, so he has a total understanding of the material, process, and final product.

Let us start with Manish. Understand that the task is to get their jobs done. Manish has two options here. He can either order parts and assemble it himself or order the material required such as wood, glue, nails, etc and then work on it before the assembly of the final product. The only difference is his lack of expertise in this field.

Vinay has the same options but has practical experience from his carpentry classes during the workshop in Engineering. Sameer has an advantage since he has both skill and experience perfected over a course of time.

All three are given three days for the task. Since Manish finds it easy to assemble the stool using parts procured from another carpenter; he talks to a carpenter he knows and orders 3 leg parts, 6 horizontal support bars, and one circular base which will sit on the top. Vinay thinks he will be able to shape the parts because of his experience as a student and orders several cylindrical wooden leg parts, cuboidal bars, and a thick sheet. Sameer has all the required material in his shop and he begins to work on the stool on the first day.

Manish and Vinay wait for a day for the parts to come. They begin to work on the second day. Manish uses the tricks learned from YouTube videos; uses a hammer to place the nails purchased from a nearby shop in the pre-made hole, applies glue in certain areas as directed in the video, and places weight on the assembled stool. He waits for the glue to cure.

Vinay uses borrowed drill bits, drill machines, cutters, sandpapers purchased from a shop, etc, and starts working on the wooden parts as soon as the parts arrive in the morning. He is able to recall his carpentry instructions and attempts to shape the parts based on drawing of his product he made last night. Sameer meanwhile has completed his assembly and has put the assembly to rest for the glue to cure.

On the third day, each of them has the stool ready. They evaluate their own work and notice certain facts. Manish notices that he did complete the task but, his stool was wobbly and not glued well. It could fall the moment he sits on it. Also, he forgets to polish the wooden parts and give it a professional finish since he forgot to watch that bit of video over YouTube.

Vinay completes the task his stool is sturdy and cured well overnight. But there are minor issues with it. One of the three legs is cut short by a few mm and the stool, a tad unstable.

Sameer on the other hand completes the task with a good product. The stool is well-balanced, and polished, as he expected from him. Sameer is satisfied with his work and finds it to stool Perfect. Manish thinks he did his best considering he had no experience of the task to be done. He is satisfied with his work. But Vinay is unhappy, he could have done better and made the product better. He doesn't find his efforts well put and thinks he wasn't productive enough and hence his stool is nowhere perfect.

Understand that all of them had a set of skills and experience, but only Sameer had the right skills and experience to produce a perfect product. Manish and Sameer were satisfied and happy with their work. Manish made a wobbly stool which could break the moment someone sat on it but happy he gave the task a go. He thinks put the efforts and he did a good job. It was only Vinay who could not overcome the fact that his work was not perfect.

In Vinay's case, it can be observed that he could not deliver what he learned from carpentry classes. The reason is simple, he put effort but didn't have the experience. Experience mattered. Since Vinay thinks otherwise, he believes he has the perfect skills to complete the task but he could not deliver the results. He is not satisfied with his results and wishes to spend another day working on the stool on his own to get to his idea of the perfect result.

In this case, the idea of perfection itself is misplaced. You see, the end product made by Vinay and Manish would not match Sameer's but the task could have been completed had they understood where their shortcomings lied. For both, it was their skill. Sameer had the perfect skill to get the expected result which resulted in better productivity, others didn't.

And in this story, every individual put effort regardless of the result. But some were satisfied and some dissatisfied. Their satisfaction made their creations perfect in their eyes and dissatisfaction made one believe he wasn't productive enough.

"Perfection is subjective and productivity is utility extracted given a certain amount of effort".

You can try to be as productive to achieve something but ultimately, it's the satisfaction you get that defines the boundary of perfection. If you aren't satisfied, you won't find anything perfect. You would just waste both your time and effort over something that doesn't suit you in the first place, as explained in the story before.

"It isn't productivity that will be the greatest enemy but your satisfaction".

Satisfaction will determine how you perceive perfection and defines where your threshold for perfection lies. The real enemy is dissatisfaction. You get demotivated and restless. You lose sight and discontinue only because you are unable to pass your own expectation. So, it's the only obstacle that comes in between productivity, from time to time.

Productivity is far from being your enemy. The greatest enemy will be your expectations which lead to dissatisfaction. It will play a major role in crafting your idea of Perfection in every day.

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By Ajay Bidyarth - August 23, 2020 7043

#### Brief

The Financial Crisis of 2008 started as a crisis in the subprime mortgage market (i.e. in a market where lending of loans is done to people who may have difficulty in maintaining the repayment schedule or in simple terms, loans were given out to people without proper checks and low credit scores) which ultimately led onto a huge global collapse.

The Financial Crisis of 2008 or Great Recession is considered the worst economic crisis since the Great Depression.

#### Financial Crisis Explained –

In the year 1996, there was a dot-com boom (or otherwise known as the dot com bubble) in the United States, a period of massive growth in the use of the internet because of which the stock market prices started increasing rapidly. However, around the year 2000, it dropped which led people and investors to withdraw their investments from the stock market rapidly. It led to the decline of the price of shares in stock markets and the interest rate plummeted to around 1% very quickly in a short span.

Investors were now looking for a brighter option than investing in stock markets.

#### Fig – Rise and fall of the Dot Com Bubble

As interest rates went lower and lower, real estate prices started rising and the US Govt also encouraged people to buy houses and properties. The demand for the same started rising rapidly and investors now found a great option to invest in (i.e. in Real Estate).

During that same time, Investment Banks saw an opportunity, chimed in and started buying loans from Banks in bulk and clubbed multiple loans under a complex derivative called CDO (Collateralized Debt Obligations) and started providing it to these Investors after getting a credit rating of "AAA" (Very Safe Investment) from the Credit Rating Agencies. Investors naturally fell for it and started buying these CDOs.

So now, the risk factor of these loans got transferred from the Banks to the Investment Banks and then again to the CDO Investors.

With the high buying demand of CDOs, Investment banks started demanding or pressurizing Banks to provide even more Loans so that they can provide more CDOs to the Investors. However, Banks had already provided loans to peo

ple with good credit history and regular income people. But in the hope of getting even more credit from Investment Banks, these same banks then started giving out subprime housing loans to people with low credit scores. Approximately \$174Bn worth of loans were given out during the period 2000-2007 and most of them were clubbed as CDOs with a "AAA" rating from the Credit Rating Agencies. Approximately 70% of these CDO's were marked with a "A AA" rating.

Investment Banks and Credit Rating Agencies were now enjoying large profits during this time. Moody's (a credit rating agency) profits increased 4x times during that period (2000-2007).

Looking at the huge profits being made by the Investment Banks and Credit Rating Agencies, Insurance companies (like AIG) now started giving out insurance on these CDOs to the investors and they called it CDS (Credit Default Swap). AIG believed that since the CDOs were rated as "AAA" (Very Safe Investment), the failure chances of these CDOs were very minimal. They misjudged or were unaware of the fact that some of the loans that were clubbed under these CDOs were Sub Prime loans.

Now CDO Investors started buying out CDS from AIG and other companies to safeguard and protect them from any losses. AIG then started making huge profits because of the premiums that the investors had to pay. But they never realized the outcome if by any chance the CDOs fail at some point in time. Thus, the risk factor again got transferred from the CDO investors to the Insurance Companies.

#### Fig – Flow Diagram showing how the Risk Factors got transferred

Coming to the loan borrowers now, Sub Prime Borrowers from banks were unaware of the fact of Adjustable Rate Loans (interest rate of these loans keeps changing) and thus had to pay lower interests at the start but more interest rates later on.

The borrowers started defaulting on these loans when the interest rates increased dramatically around 2007 and thus banks had to then resell those houses to make up for the loans defaulted. Added to the problem was the fact that borrowers were not spending any amount of money from their pockets while taking loans and banks were providing the full amount of loans. Almost 50% of the borrowers did not pay anything from their own pocket and bought the home only using the housing loan.

This led to a huge increase in the defaulters of borrowers and ultimately banks had to auction houses to gain credit back. With the high-interest rates and no one to buy the auctioned houses, this ultimately caused a chain reaction and banks were no longer receiving credit. The prices of Real Estate started falling drastically and people with good credit scores who had earlier taken housing loans also started defaulting because the price of their houses/homes fell below the loan amount that they had taken earlier. Banks stopped receiving money and also because of this chain reaction, the value of CDOs ultimately came down to 0.

Some Investors went for huge losses and few Investment companies went bankrupt (ex – Lehman Brothers). Moreover, insurance companies had to pay back those investors who had taken insurance. As a result, some of the insurance companies also went bankrupt. AIG too almost lost about \$100Bn in paying back the investors who had earlier insured their CDOs. However, the US Govt. finally decided to bail out AIG in order to save them from going bankrupt.

CDOs and CDSs were not regulated during that time by the Federal Reserve and thus this whole situation ultimately led to credit crunch (became very difficult to get loans) and the whole economy of the US underwent a crisis that led to a global impact all around the world. Unemployment increased manifold and many new businesses had to shut down. Global trades all around the world also saw a crisis and finally, Global Recession hit the World.

#### Causes of the Crisis –

Improper screening of loan borrowers resulting in subprime loan borrowers which included even borrowers with no stable income. Credit rating agencies rated all the CDOs highly and investors were purchasing without proper monitoring. the same goes for Insurance companies. Lax regulation of CDOs and CDS' by federal reserve banks. The large size of interbank lending that compounded the crisis

#### Effects of the Crisis –

House prices plummeted. The unemployment rate increased all over the US and the EU. 8M people lost jobs globally. 2.5M business devastated. 4M houses foreclosed. Approx. \$450Bn losses (Banks and Investment Banks combined)

#### Ways to Avoid Such Crisis in Future –

Tighter regulations on loan screenings. Regulations to prevent banks from growing too big and preventing systemic risks (addressing 'Too Big to Fail' problem) Borrowers must be made aware of rate adjustable loans. Credit rating agencies should not rate the CDOs without proper risk assessment. Partnership with Fintech companies to develop robust alternative credit scoring models for people with less credit history. Strict regulation on CDOs and CDS' by Federal Banks

Blackcoffer Insights 19: Neermalya Pratim Das, SCMRD-Pune

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By Ajay Bidyarth - August 20, 2020 7111

Gender diversity is an equal representation of all genders in workplaces. One of the most important sectors where there is under-representation of gender diversity is the technological industry. Gender diversity means you have an equal opportunity which is not limited by gender. But, the true reality is gender diversity is a far outcry in the world.

Gender diversity isn't a new topic but an old and global phenomenon and technology industry is not a stranger to it. Women are often underrepresented in the technology sector. To understand the gap, let's look at some statistics.

The percentage of women employed across all job sectors in the US has grown to be 47%. Out of 47%, 34% belong to the top 5 technology companies (Amazon, Apple, Facebook, Google, and Microsoft). Women software engineer hires have only increased 2% over the last 20 years. 50% of women said they have experienced gender discrimination at work. Only 37% of tech startups have at least one woman on the board of directors. The ratio of men to women in engineering is 5:1.

25.5% of Google's leaders on a global scale are women.

Even in the tech conference organizations, there were fewer female keynote speakers than male speakers. Eight percent to 17 percent of gay and transgender workers report being passed over for a job or fired because of their sexual orientation or gender identity. Globally, women only earn 77 cents to the dollar when compared to men. According to a McKinsey Global Institute report, if women were to play an identical role in labor markets to that of men, as much as \$28 trillion, or 26%, could be added to the global annual GDP by 2025. According to UNESCO, over 2.7 billion women are legally restricted from having the same choice of jobs as men. And women's labor force participation rate is 48.5 % compared to a rate of 75% for men.

After looking at these staggering numbers, we see how biased gender diversity is even in the technological sector.

Need of the hour

With rapid industrialization and education about the importance of rights, gender diversity is very important in today's world. Gender equality represents a society that has lesser violence and provides a safer world for everyone. It is also directly proportional to sustainable development and ensures human rights to everyone. As today's markets are increasing along with customers' preferences, to understand customer profiles and build products we need gender diversity in our organizations. Equal representation helps in a better decision-making process for a positive impact.

Men and Women invest back into their families and having gender equality and diversity helps build values into families and households. Empowering individuals not only help themselves but also the economy of the nations. Gender equality and diversity should be built into organizations' beliefs and values.

<https://www.statista.com/chart/4467/female-employees-at-tech-companies/>

Global Gender Gap Report (2017)

Why is this happening?

Perception: If we see the word "gender", it is a socially constructed definition. And this definition changes as per different cultural norms. In a much broader term, our society is also not aware of the concept of binary and non-binary gender, which includes queer, Trans, and Intersex individuals as well. The socially acceptable thing is to have gender expressions as per our gender identity. So, when it comes to choosing their career, people tend to choose a job role that gives them higher social belongingness. E.g. We see more women(as compared to men) in nursing careers as it requires more feminine qualities.

There are different versions of this perception: which we can see either in the society(in terms of socially assigned gender roles) or in the workplace(in the form of gender discrimination, stereotypical thinking, sexism, etc.). E.g. As per their assigned roles in society, women are most likely to take care of their family and children, and this affects their income and career growth. The motherhood penalty is a term defined by sociologists

which states about the inverse correlation between income level and the number of children, i.e. there is also an income difference between a mother and a non-mother employee. As per OECD data(2012), there is a 7% reduction in wages for women per child.

Lack of economic opportunities: Even in the tech industry, women are paid less than men. As per ILO data(2019), on average women are paid 20% less than men worldwide.

Even when it comes to promotion, men are preferred more. It is to be noted that the numbers are even worse when there is intersectionality involved. E.g., a transgender woman will be paid less than a white woman and so on. As per the National Centre for Transgender equality, one out of two transgender people faces adverse effects: including 23% were denied a promotion, 44% were passed over for a particular job position and 26% are fired from their workplace just because they are transgender.

Ways to improve gender diversity:

We can improve this scenario from the perspective of different stakeholders who are involved.

For Society :

Creating Tech awareness from School level: As per the HDR report( 2017), no. of boys pursuing STEM program is 97% higher than girls. One way to improve this is to introduce more strong role models to advocate for this issue. Minority gender communities should be aware of the multiple job opportunities and career growth available in this field. These job roles are not even gender-specific anymore. For developing countries like India, STEM scholarship programs can be introduced from the secondary education level.

Address Bias/Stereotypes: It is to be noted that perceptions, stereotypes, and biases are not just something we learn in school but our upbringing also creates these, the things we watch, listen, and read daily. So, it also becomes the duty of the society to create a more inclusive environment. E.g. A more privileged person should fight for the fundamental right of the less empowered or less privileged person in society.

There should be active encouragement from parents, teachers, and educators for students in STEM programs regardless of their gender identity.

For Companies:

To promote gender diversity in the workplace, companies need to focus on three things:

Unbiased Recruitment policies:

Generally, there is a lot of unconscious bias and prejudices when hiring women, trans, intersex, and queer individuals. There needs to be a diversity and inclusivity team in the HR itself that addresses these issues. A blind recruitment drive can be conducted where there is no need to mention gender in any of the documents.

Having structured questions during the interview might help to remove any unconscious biases.

Diversity sensitivity training: Workplace policies need to create a company image that hires everyone irrespective of their gender identity and can even keep it optional in all the job formalities and documents.

Conducting proper sensitivity training to employees is essential as they need to use correct pronoun/gender-neutral language.

Not just sensitivity training, strong workplace policies need to be in place which deal with any form of harassment or gender discrimination.

To create accountability and transparency in their process, companies can also share diversity and inclusivity company data.

Retention policies:

Creating Mentorship models:

Have a mentorship program in the workplace that advocates for women, trans, intersex, and non-binary individuals as leaders and encourages role models within this community.

Need to promote diversity in the workplace via proper workplace policies and legal guidelines(e.g. conducting mandatory sensitization training for all employees or framing zero-tolerance policies.)

Including proper maternity leaves, child care facilities, and flexibility of working hours/remote working arrangements can be helpful for minority gender in keeping their work-life balance.

Develop support programs for these communities who are joining after maternity leave. It might be in terms of psychiatric or mentorship support.

Increase Pay parities: It can be done in the following ways:

Create flexibility in job roles so that women can move on to higher positions.

Build an inclusive workplace that supports pay parity- no salary difference based on gender for the same job roles.

Create a transparent performance review process and ensure that there are no unconscious biases during the recruitment process.

Doing a pay review within the organization to check how much pay difference exists before making framing policies.

Lastly, there needs to be proper government policies in place which provide a constitutional or legal framework starting from the basic education level. It may begin from increasing the gross enrollment rates of all students in schools (irrespective of their gender identity) for developing countries( like India) to have proper compensation policies in the workplace(as similar to what states like California, New York has adopted) to ensure pay parity.

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title = soup.title.get_text()

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By Ajay Bidyarth - August 20, 2020 6989

The Covid-19 crisis and its fallout including recession, layoffs, and uneven economic pain-as well as recent protests over police brutality and demands for racial justice, have presented many of us with challenges that we've not encountered before. The high-stakes and unfamiliar nature of these situations have left many people feeling fearful of missteps. No one can reduce mistakes to zero, but you can learn to harness your drive to prevent them and channel it into better decision making. Use these tips to become a more effective worrier.

Don't be afraid or ashamed of your fear.

Our culture glorifies fearlessness. The traditional image of a leader is one who is smart, tough, and unafraid. But fear, like any emotion, has an evolutionary purpose and upside. Your concern about making mistakes is there to remind you that we're in a challenging situation. A cautious leader has value. This is especially true in times like these. So don't get caught up in ruminating: "I shouldn't be so fearful."

Don't be ashamed or afraid of your fear of making mistakes and don't interpret it as evidence that you're an indecisive leader, or not bold, not visionary. If you have a natural tendency to be prevention-focused, channel it to be bold and visionary! (If you struggle to believe this, identify leaders who have done just that by figuring out how to prevent disasters.)

Use emotional agility skills.

Fear of mistakes can paralyze people. Emotional agility skills are an antidote to this paralysis. This process starts with labeling your thoughts and feelings, such as "I feel anxious I'm not going to be able to control my customers enough to keep my staff safe." Stating your fears out loud helps diffuse them. It's like turning the light on in a dark room. Next comes accepting reality. For example, "I understand that people will not always behave in ideal ways." List off every truth you need to accept. Then comes acting your values. Let's say one of your highest values is conscientiousness. How might that value apply in this situation? For example, it might involve making sure your employees all have masks that fit them well or feel comfortable airing any grievances they have. Identify your five most important values related to decision-making in a crisis. Then ask yourself how each of those is relevant to the important choices you face.

Repeat this process for each of your fears. It will help you tolerate the fact that we sometimes need to act when the course of action isn't clear and avoid the common anxiety trap whereby people try to reduce uncertainty to zero.

Focus on your processes.

Worrying can help you make better decisions if you do it effectively. Most people don't. When you worry, it should be solutions-focused, not just perseverating on the presence of a threat. Direct your worry towards behaviors that will realistically reduce the chances of failure.

We can control systems, not outcomes. What are your systems and processes for avoiding making mistakes? Direct your worries into answering questions like these: Is the data you're relying on reliable? What are the limitations of it? How do your systems help prevent groupthink? What procedures do you have in place to help you see your blind spots? How do you ensure that you hear valuable perspectives from underrepresented stakeholders? What are your processes for being alerted to a problem quickly and rectifying it if a decision has unexpected consequences?

### Broaden your thinking.

When we're scared of making a mistake, our thinking can narrow around that particular scenario. Imagine you're out walking at night. You're worried about tripping, so you keep looking down at your feet. Next thing you know you've walked into a lamp post. Or, imagine the person who is scared of flying. They drive everywhere, even though driving is objectively more dangerous. When you open the aperture, it can help you see your greatest fears in the broader context of all the other threats out there. This can help you get a better perspective on what you fear the most.

It might seem illogical that you could reduce your fear of making a mistake by thinking about other negative outcomes. But this strategy can help kick you into problem-solving mode and lessen the mental grip a particular fear has on you. A leader might be so highly focused on minimizing or optimizing for one particular thing, they don't realize that other people care most about something else. Find out what other people's priorities are. Recognize the value of leisure.

Fear grabs us. It makes it difficult to direct our attention away. This is how it is designed to work, so that we don't ignore threats. Some people react to fear with extreme hypervigilance. They want to be on guard, at their command post, at all times. This might manifest as behavior like staying up all night to work.

That type of adrenalin-fueled behavior can have short-term value, but it can also be myopic. A different approach can be more useful for bigger picture thinking. We need leisure (and sleep!) to step back, integrate the threads of our thinking, see blindspots, and think creatively. Get some silent time. Although much maligned, a game of golf might be exactly what you need to think about tough problems holistically.

Detach from judgment-clouding noise.

As mentioned, when people are fearful they can go into always-on monitoring mode. You may have the urge to constantly look at what everyone else is doing, to always be on social media, or check data too frequently. This can result in information overload. Your mind can become so overwhelmed that you start to feel cloudy or shut down. Recognize if you're doing this and limit over-monitoring or overchecking. Avoid panicked, frenzied behavior. On its own, being afraid of making mistakes doesn't make you more or less likely to make good decisions. If you worry excessively in a way that focuses only on how bad the experience of stress and uncertainty feels, you might make do or say the wrong things. However, if you understand how anxiety works at a cognitive level, you can use it to motivate careful but bold and well-reasoned choices.

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By Ajay Bidyarth - August 18, 2020 7189

The word pandemic may be the most used word for the last decade, and we know why. The year 2020 comes with a lot of unprecedented threats to humans as well as to nature. While no business was left insulated from its effect, small businesses were one of the most affected, as they rely on day to day sales and keep the inventory minimum, based on the demand of customers and have a low margin to maneuver.

In an article by HSBC's Navigator, which described the preparedness and contingency plan for the future, Indian business rated high among its peers. The businesses in India have shown resilience to face adversity which can be attributed to varying degrees of adjustment and adaptability. The businesses, while able to adhere to government guidelines have managed to facilitate their customers efficiently and effectively. However, the impact on micro, small, and medium enterprises cannot be left unattended.

The Indian subcontinent has an estimated ₹ 633.88 lakh of MSME, out of which 51.2% are in rural areas which employ 44.84% of the total employment provided by this Sector. The MSME sector with 1170 lakh people constitutes 40% of the total workforce. As per the ministry of commerce MSME contribution in Gross Domestic Product (GDP) and export are 37% and 43% respectively.

With the huge contribution toward GDP as well as export, the impact on the national economy due to the shock in the MSME sector from the pandemic will be equally devastating. While different businesses face different types of obstacles, we have pointed out 8 of the most common issues faced by them.

**Low Working Capital** :- Small Businesses usually have a low working capital ratio which means that they don't have enough capital to finance their daily requirements. In these difficult times, this problem has gone to the next level as they will have obligations to pay but due to less or no revenue for a few months, there are high chances that they may not be able to meet them.

**Low Cash Cycle** :- According to a survey done by economic times, they have found that small businesses usually run on a 27 days cash cycle and due to pandemic looming around they are not able to operate efficiently. More than half of the small businesses of the country have either exhausted their funds or are close to doing so. It is because of the unprecedented demand crash due to lockdown.

**Not Registered** :- Many of the small businesses in India are not registered as they are just too small and this invisibility is both an advantage and disadvantage for them. Being out of the formal system, they don't have to maintain proper books of accounts, pay the taxes and follow all the regulatory norms but the downside of this is that it is difficult for them to access government programs focused on them and make use of it.

**Difficult to get financial support** :- It becomes a huge task for small businesses when it comes to getting loans. This is because they don't have proper accounts and assets which they can keep as mortgage to get loans from banks. Due to this, they have to use a traditional method of lending which involves a high rate of interest and during these times it is also getting difficult to get loans from this area.

**Existential Crisis** :- With the abrupt change in the business environment the businesses either have low production or they cease to exist. While low production will put a burden on the owner's pocket but if they closed their business and start fresh, the cost of starting a new business post-crisis will be high and with limited creditworthiness which makes business difficult to regain their lost market share.

**Migration** :- In the starting days of lockdown small businesses were not able to pay their workers which led to migration, as they moved back to their hometowns. This has led to a problem of the availability of a suitable workforce for these businesses as they are trying to get things back to normal.

**Absence of skills required** :- As, hiring of new workers is done to get things to normal it is getting difficult for them to provide them with suitable skills needed for some particular jobs and also the existing workforce is not trained enough to cope with the new normal of working online.

**Creditworthiness** :- It is defined as the extent to which a company considered suitable to receive financial credit, often based on the reliability in the paying money in the past. As businesses are dependent upon the line of credit and the supply chain if it gets hampered it will result in the loss of revenue as well as reputation.

For any business, cash in hand is oxygen. The small business which usually has at most 1-month cash to run the business if the revenue stream dries up, which in this tough time has to improve gradually. To manage the optimal cash balance is the key to success in this tough time. The optimal cash balance here, defined as "the less of the amount of cash outflow in form rent, employee salaries, and raw material without postponing the payable as they are doing what banks have to do, to the inflow from sale".

**Cash Conversion Cycle** :- It refers to how fast cash moves through the business. In these times, when a lot of businesses are switching to online platforms they should think of improving the cash cycle maybe by making changes in the sales cycle, reducing inventory in hand, and improving upon debtor's turnover ratio and cash collection period.

**Prioritize the products** - The owner of the business should do an analysis of all the products and services it offers and ranks them on the basis of profitability. They should focus more on the most profitable product and remove the least profitable product from their portfolio.

**Labour Productivity** - While it is difficult to manage the business with the current scenario, if any business manages to do so, they can have a huge advantage over others. The productivity of the employee defined as the unit output produced by per employee. While firing underperforming employees, reduce the salary expense but variable performance-based compensation will strive them to increase productivity.

**Getting new skills** - There are many online platforms available from which existing employees can be provided with new skills at a very lower cost. This can also give them an advantage in the future if the investment is strategically done.

**Tapping the resources provided by the government and other financial institutions** :- The government of India has launched a rescue plan for small businesses through which they can get loans in a much easier way compared to before. It increased the upper limit of the outstanding loan amount from ₹. 25 crores to ₹ 50 crores. Some financial institutions also launched schemes like COVID-19 Start-up Assistance Scheme ('CSAS') by SIDBI, RBI enhancing the limit for loans to 90% from 75%, etc.

**Making a 3-month financial plan** - Small business owners should make a different financial plan for the next 3 months and focus on the areas where cost can be cut like delaying payments of rent if possible. It should majorly focus on what costs are necessary and which cost can be put on hold for some time.

**Tapping the newly available opportunities** :- It is a very good opportunity to capitalize on the available resources and encash the different opportunities which have arisen due to this scenario like demand for sanitizers, masks, more online platforms for essentials, etc.

In any given situation, business is like juggling between multiple tasks to optimize the performance while maximizing the revenue. The current situation has added another layer of challenge. This challenge will test management skills in various aspects of our business owner.

With this article, we have pointed out the major challenges and possible ways to alleviate the impact. As Anthony Robbins quotes, "Every problem is a gift-without problems we would not grow", the current market has wiped out their share in the market which gives an opportunity to other businesses to grow and lower the expense.

While there may be many facets that need to be handled precisely, communication is one of the major tools that will create a positive environment among workers or teams which will influence the customer behavior and result in terms of revenue. The communication will also help to increase productivity and create trust in a supply cha

in which will improve the cash conversion cycles and working capital ratio. Marketing through word of mouth has no added cost but the benefit can be scaled too much-required revenue. The choice of an effective marketing tool can also influence our target customer and will influence their will to buy the product or service(s) strategically. Cash from operating activity improves if we were able to lower our expenses. To lower these expenses, small business owners have to create a different plan (good, average, and worst) keeping the 6-month frame in mind. Breaking down them in monthly targets would further help them to identify the actual scenario and update the strategy accordingly. As Warren Buffet quotes, "You only have to do a few things right in your life so long as you don't do too many things wrong." this is the right time to do the right thing and over time businesses will ripe its benefits. Blackcoffer Insights 19: Nidhi Khandelwal & Sudeep Shrivastava, IMT Nagpur

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title = soup.title.get_text()

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By Ajay Bidyarth - November 6, 2021 6290

Some vendors (fruit and vegetable sellers) began venturing out after a few days without explicit permission and immediately faced police harassment. After a few weeks, the government eased restrictions and essential vendors were being permitted to vend (due in large part to the advocacy of vendor organizations and activist networks). However, the cost of doing business, as well as the risk, has gone up significantly, with vendors not having access to wholesale markets and suppliers and having to spend more on travel costs due to travel restrictions in place in the city. Also, with the lockdown still partially in place, the number of buyers has gone down and so have earnings. Due to the harsh summer heat, perishable fruits and vegetables also have a reduced shelf life so vendors are unable to capitalize on whatever produce they do have.  
The state has recently announced a stimulus package of INR 5000 crore for nearly 50 lakh vendors, acknowledging the grave impact of their loss of livelihood. The intended relief for vendors will be a credit loan that will p

rovide an initial working capital of INR 10,000 for all vendors, but this is not sufficient. Instead of credit, the government should think of converting it into direct income benefit, a cash grant, as livelihood support to start the income activity regularly. The vendors need income support to be able to restart work, and if they are not able to do so, how will they return the loan. In the face of the ever-changing crisis, vendor organizations have to step forward and advocate for vendors to be provided the resources they need to be able to resume their livelihoods. To this end, vendors organizations could consider the following for an advocacy agenda:

Livelihood promotion for all vendors, including those selling non-essential goods: The impact of COVID-19 has been very harsh on informal workers who have exhausted their capital and earnings in trying to feed themselves during the extended lockdown period. Vendors need to be able to resume vending for survival and the government should take steps to begin to reopen markets and allow vendors back on the streets. Reopening of Markets keeping in mind social distancing and hygiene: Delhi has many different types of traditionally crowded markets including weekly markets (for fresh food, cooked food and essential household items) and daily markets that operate on the sides of roads. These markets will need to resume keeping in mind the need for social distancing and the government should release guidelines for the same. Going forward, vending zones must also be designed keeping in mind the need for social distancing and for sufficient hygiene facilities (running water, washing stations and toilets). The authorities should work with Town Vending Committees (TVCs) for the same.

Provide direct support which is de-linked from existing registration requirements: As lockdown is lifted and vending resumes, vendors who have been at home for months will need direct income benefits to resume their work. The government stimulus package, while a welcome step, is insufficient in the nature of relief (credit not direct cash transfer) and eligibility (only registered vendors are eligible, which leaves out the majority of vendors in the country). In addition, government relief and support needs to be de-linked from very rigid registration requirements, as very few vendors have been registered in India. In Delhi, out of roughly 300,000 street vendors, only about 131,000 have some form of occupational identification. If the criteria for any kind of cash grant or livelihood support is linked to occupational identification by the state, then the government should also accept registration with a workers' organisation/union as a proxy for government-issued vending passes.

Ensuring hygiene and social distancing at sites of vending: The government needs to take steps for provision of running water and soap/sanitiser for street vendors at their place of work. Additionally, vendor organisations should work with food safety authorities in the country to train vendors (especially cooked food vendors) in ways to maintain hygiene while working.

Taking steps to survey and register more vendors for access to government benefits: As mentioned earlier, the number of vendors who have some form of identification are a fraction of the actual population of vendors in Delhi. Before the crisis and subsequent lockdown, the Town Vending Committees (TVCs) were supposed to start surveying and registering vendors. As we get used to the new normal, the process of survey and registration should also begin to ensure that all vendors are able to access social security benefits and financial aid during this period of crisis.

Blackcoffer Insights 34: Parth Goyal, IET DAVV

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Consumer StaplesFood & Staples RetailingWhat We Think Impacts of COVID 19 on Vegetable Vendors

By Ajay Bidyarthi - November 6, 2021 5215

The COVID-19 pandemic has grown into one of the most major and socially disruptive health crises in recent memory, with growing concern about how the pandemic's catastrophic economic and social repercussions are affecting food systems at both the global and local levels. Given the importance of the retail food environment in establishing and sustaining healthy diets, interruptions to specific aspects of it, such as the availability of fresh vegetables, could have a negative influence on population health, which has already been noted as a source of worry.

Despite the dominance of national and international supermarket chains, warehouse clubs, and supercenters in grocery retail, vegetables are offered in a number of other food retail settings. Fresh vegetable vendors are typically smaller and more community-oriented than other restaurant or retail food outlets and can include chain or independent grocery stores, greengrocers, storefront stands, street carts, and even makeshift platforms dedicated to the sale of fresh vegetables. Smaller community fresh vegetable vendors who may conduct business on the sides of major streets or on storefronts have played an integral role in the food environment in large urban centers such as New York City (NYC), particularly in ethnic enclaves, despite the fact that fresh produce does not have a significantly higher nutritional value and fresh produce can also be purchased at these larger food retailers.

Since the COVID-19 pandemic began, many fresh fruit and vegetable vendors, notably street carts selling fresh vegetables in cities across the United States, including New York City, have been forced to close owing to a combination of falling demand and fear of catching COVID-19. The importance of fresh vegetable vendors varies by neighborhood within cities. Furthermore, these fresh vegetable vendors attract visitors and interborough shoppers from a variety of cultural backgrounds not only Asian ones who are looking for things that are not available elsewhere in the city or for the same low prices.

These fresh vegetable vendors, unlike larger, well-established grocery store vendors, may not have the financial infrastructure to sustain the shifts in supply and demand produced by the COVID-19 epidemic; consequently, the danger of closure or modifications in services may be greater for these vendors.

In order to assess the impact of the COVID-19 pandemic on services offered by fresh vegetable vendors, surveillance data from both before and after the pandemic's inception is required.

After a few days, vegetable dealers began venturing out without explicit permission and were quickly harassed by police. After a few weeks, the government relaxed the limitations, allowing vital traders to sell their wares (due in large part to the advocacy of vendor organizations and activist networks). However, the cost of doing business has increased dramatically, as vendors no longer have access to wholesale markets and suppliers, and they must spend more on travel expenditures owing to city-imposed travel limitations. Furthermore, with the partial lockdown still in place, the number of buyers has decreased, as have earnings. Perishable vegetables have a shorter shelf life in the summer heat, thus vendors are unable to capitalize on whatever produce they do have. Consider the situation of Delhi at the starting of COVID 19. The state has launched an INR 5000 crore stimulus package for over 50 lakh vendors, realizing the serious consequences of their loss of livelihood. The targeted relief for vendors is a credit facility that will provide all sellers with an initial working capital of INR 10 ,000, but this will not be enough. Instead of credit, the government should consider changing it into a direct income benefit, such as a cash grant, to help people start earning money on a regular basis. The vendors require income support in order to resume work, and how will they repay the loan if they are unable to do so? Vendor organizations must step forth in the face of the ever-changing crises and lobby for vendors to be given the resources they need to continue their livelihoods. Vendor organizations could use the following as part of their advocacy agenda:

Promotion of vendors' livelihoods, particularly those selling non-essential goods: COVID-19 has had a particularly painful impact on informal labourers, who have spent all of their savings and wages trying to feed themselves during the prolonged lockdown. Vendors must be permitted to restart peddling in order to survive, and the government should take steps to reopen marketplaces and reintroduce vendors to the streets. Market reopening with social distance and hygiene in mind: Delhi features a variety of typically crowded markets, including weekly markets (for fresh food, cooked meals, and necessary household items) and daily markets on the sides of highways. These markets will need to resume considering the necessity for social separation, and the government should issue recommendations in this regard. In the future, vending zones must be planned with social distancing in mind , as well as adequate sanitary facilities (running water, washing stations and toilets). For this, the government should collaborate with Town Vending Committees (TVCs). Provide direct assistance that is not tied to existing registration requirements: When the lockdown is lifted and vending starts, vendors who have been at home for months will require direct income benefits in order to return to work. While the government stimulus plan is a positive step, it falls short in terms of assistance (credit rather than direct cash transfer) and eligibility (only registered vendors are eligible, which leaves out the majority of vendors in the country). Furthermore, government assistance and support must be divorced from the country's strict registration requirements, as only a few vendors have been registered in India. Only about 131,000 of Delhi's 300,000 street sellers have any type of employment identity. If the state requires occupational identity for any type of monetary grant or livelihood assistance, the government should accept registration with a workers' organization/union as a surrogate for government-issued vending passes. Providing flowing water and soap/sanitizers to street sellers at their place of business: The government should take steps to provide street vendors with running water and soap/sanitizers at their place of business. Additionally, vendor organizations should collaborate with local food safety authorities to instruct vendors (particularly those selling prepared foods) on how to maintain hygiene while on the job. Taking measures to conduct a survey and register additional vendors for government assistance: As previously stated, the number of sellers with some sort of identity is a small percentage of the total number of vendors in Delhi. The Town Vending Committees (TVCs) were expected to begin surveying and registering vendors before the crisis and ensuing lockout. As we adjust to the new normal, the survey and registration procedure should begin to guarantee that all vendors have access to social security benefits and financial assistance during this difficult time.

Finally, some fresh vegetable sellers may have shuttered for a period of time early in the epidemic, only to re-open recently. Alternatively, vendors may have launched soon after the in-person checks were completed, but still within the June-July 2020 endpoint timeframe. This is a drawback of the method; in order to offer the most reliable COVID-19 pandemic monitoring data, data must be collected in a short period of time.

TAGS COVID 19 Ecosystem Food Healthcare Vendor

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By Ajay Bidyarth - June 22, 2020 6521

As the Coronavirus pandemic unfolds, most industries face problems they had never imagined or prepared for. The Aviation and Tourism industries face the highest stress as Coronavirus spreads because not only are they (usually) a leisure spending but also the nature of the disease directly conflicts with the industries' innate business models. In this article, we will look at the impact of COVID-19 pandemic on the Tourism and Aviation industries both from the demand side and the supply side.

The Aviation and Tourism industries has two major customers: tourists and business travellers. Let us base this essay in the India and see what the reaction of the customer segments is expected to be like.

Almost all tourists will avoid vacationing for the foreseeable future because of:

Financial hardship: an exceptionally large part of the world's working population has been affected financially because of the pandemic. Unemployment rates are soaring and the ones who do still have a job are facing pay-cuts, furloughs and deferment of salaries.Risk of contraction: because the disease spreads via social contact, it will only be safe to vacation if the destination is regularly sanitized and is not crowded. Inherently, tourist destinations are not compliant with these regulations and even if the industry makes a change to being clean and introducing social distancing measures, convincing risk averse tourists of to travel to these vacation spots will be difficult.Expansion of alternatives ways to relax: as most people adapt to work-from-home environments, the burnout rate is declining. People are more relaxed in their own homes and very few people are eagerly looking for a getaway. Combined with this deterrent is the rise of alternative ways to relax. More and more people are going out for walks, doing yoga and finding new hobbies. Due to this increase for pursuit for happiness at home, it might be likely that tourists will avoid traveling because they don't feel the urge to break-free and move away for a holiday.

Now, let us look at different types of holiday revellers. Tourists can be foreigners or domestic tourists. Acco

rding to Business Insider "In 2019, almost 10 million foreign tourists visited India – spending over ₹1,800 billion during January to November period.". However, because of the pandemic, almost all this business has been lost.

Due to the reasons stated above most foreigners will not prefer to travel. Those who do dare to venture out, perhaps wooed by discounted deals to places which would have otherwise been out of their budgets, will possibly be warded off by the one of the following factors:

Poor quality of health care in India: in the off chance that a tourist contracts COVID-19, they will probably be accustomed to a better healthcare system than the one India provides. Being a developing country India will find it hard to convince foreign tourists that our healthcare systems are up to the mark of their home countries. Densely populated regions around tourist destinations: because most tourist destinations support a neighbouring economy, the areas are often densely populated, which leads to a higher risk of transmission of COVID-19 and the foreign tourists are cognizant of this fact.

Moving our focus to domestic tourists, we subdivide our population according to income levels:

**Below Poverty Line:** these people don't travel  
**Lower Income Families:** these people majorly only travel to religious places or to visit family. Thus, they don't contribute to the aviation industry at all and generate very little revenue for the tourism industry as they prefer to stay in cheap lodges or at a relative's place.  
**Middle Income Families:** they travel once in a year or two and tend to avoid airplanes. Revenue in the tourism industry is also limited from this subsection.  
**Upper Middle Income Families:** they vacation regularly, often flying to near-by holiday spots. This section of our economy is severely hit by the Coronavirus' financial hardships. People have lost jobs and almost everyone has low liquidity. Being risk averse, these people will probably save money and avoid spending on vacations for some time. The loss of volumes from this sector will affect the Aviation and Tourism industries severely.  
**High Income Families:** this sector is relatively insulated from the financial hardships caused by Coronavirus and is likely to spend on holidays if they are assured of the sanitization and social distancing.

In order to attract well paying customers, the Aviation and Tourism industries will have to spend a considerable amount of money to become sanitation compliant which will push profit margins even lower. Most Aviation and Tourism activities made money not on individual margins but on collective volumes, thus, they are inherently incompatible with the concept of social distancing.

Because of COVID-19 pandemic, businesses have realized that more and more meetings can be handled over video calls, thus, the movement of business personnel will be restricted. There will still be some representatives who will fly out to conduct business, but the industry can expect a permanent drop in revenue from this sector.

Moving over to the supply side, the Aviation and Tourism industries face strong disruptions in their supply chain. Because the industry is a leisure expense, manufacturing of many supporting equipment like the adventure sports gears and even parts of planes themselves has stopped. Because of the drop in demand, it is going to be tough to get the supply chain back up again. Furthermore, workers are afraid to show up to their jobs because of the high risk of contracting the virus due to exposure to multiple customers from different geographies.

Let us now see some examples of how the industry has done through March and April.

**Airbnbs (in America):**

The bookings vanished in mid-March. Property owners had bought or leased real estate to list on the app were severely affected. The sharing economy, like Uber, Lyft and DoorDash had taken a hit but Airbnb was worse off because their expenses include cleaning services, interior design (one-time spend), and property maintenance which are fixed costs.

Thus, because of the pandemic the revenue was gone but the costs exist. They have people who depend on the owner's rental income which made the problem worse.

Hosts usually decide cancellation policy, but under extreme circumstances, like this one, the company decided to override all existing policies (many of whom weren't strict) and gave full refund to the guests. The company got \$2 billion loan and has helped out the owners, financially by paying 25% for cancelled bookings capping at 5k/host. They have helped some hosts by getting them eligible for small business loans and avoid eviction.

Thankfully, there are too few properties to cause a housing crisis, but breakdown could cause strain on lenders and undermine property values (all want to sell to avoid foreclosure or defaulting on loans). AirDNA states that the listing split-up for Airbnb is: 33% list single property, 33% owners list 2-24 properties, 33% hosts have 25+ properties.

Some state governments in America have banned short-term rentals. This hurt the Airbnb owners because people looking to quarantine outside their homes or near relatives could've generated revenues.

So, what are hosts doing now?

Many are discounting units and looking for long-term tenants (12 months). Many are planning to apply for a small-business loan, seek forbearance from banks, find long-term tenants independently of Airbnb and sell property.

**Reluctance of workers to comeback to work (America):**

According to the Wall Street Journal, roughly half of all US workers stand to earn more from the Coronavirus rather than their work pay cheques. However, it must be noted that some have not gotten their money due to bureaucratic issues.

This complicates reopening because workers don't want to come back and expose themselves to the virus and earn less. But businesses want workers to come back so that their small business loans can be forgiven, and business can reopen. However, money in the consumer's pockets means the economy expected to rebound quickly when businesses open. About 40 million Americans are now on unemployment benefits, majorly from restaurant, hospitality, and retail industries.

Congress chose a flat amount of relief because it was really time-consuming for payments to be calibrated to each worker's lost wages. Their \$600 federal payment corresponds to \$15/hours wage, but 21 states follow \$7.25/hours.

Most workers don't want to sit at home and are anxious to get back to work, but right now staying at home is the smartest financial decision for their families.

Workers should be ineligible for unemployment benefits if a job is made available to them. But owners are reluctant to report workers to authorities and sever relationships with employees they may need more later in the year when tourism demand is expected to pick up. Without income support, low-wage workers would likely seek out other jobs, including side hustles and gig work, which could expose them and their households to the virus. Thus, according to the government, it was important to give such a large stimulus to the economy.

**Coronavirus on planes:**

Studies of SARs suggested that people sitting close to infectious persons were at large risk. Combined with that, in long journeys, passengers may take off masks. Thus, the risks of transmission are large and airlines need to focus on figuring out how to prevent transmission in planes.

Currently, the airlines plan on using self-cleaning material, long-lasting disinfectant, touchless lavatories, UV light as a disinfectant, antimicrobial coating for frequently touched surfaces, and cleaning between flights.

However, even after these efforts, only 12% of people are flying (compared to last year, same time) as of 27th May 2020.

Aviation and Tourism industries have the curse of being a luxury expense and thus, as the Coronavirus pandemic spread, the entire industry jolted to a halt. They are one of the hardest-hit sectors and have to adapt to a new normal wherein the revenue levels are unlikely to match to pre-COVID levels and margins have also reduced. However, in with a bleak future, this industry is here to stay because people have to travel, and eventually they

will vacation as well. Coronavirus has become a "survival of the fittest" test for this industry and the stakeholders will come out of this disaster with strong business processes.  
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Article:

Home What We Think Impact of COVID-19 pandemic on sports events around the world.

BlackcofferWhat We ThinkEntertainment Impact of COVID-19 pandemic on sports events around the world.

By Ajay Bidyarthi - June 23, 2020 6382

The COVID-19 pandemic has caused the most significant disruption to the worldwide sporting calendar since World War II. Across the world and to varying degrees, sports events have been canceled or postponed. The 2020 Summer Olympics in Tokyo were rescheduled to 2021. Spectators have no games to watch and players no games to play. Only a few countries, such as Turkmenistan Belarus and Nicaragua, have continued professional sporting matches as planned.

#### SOCER

For an overview of the state of play in Europe's soccer leagues amid the coronavirus outbreak click here:

- \* Major League Soccer players returned to voluntary training on May 6.
- \* The 2020 K-League season kicked off on May 8 behind closed doors.
- \* Euro 2020 and Copa America were postponed. The two tournaments will now be staged from June 11 to July 11, 2021.
- \* The Euro 2021 Women's Championship has been pushed back to July 6-31, 2022.
- \* Asian Champions League: The start of the knockout rounds was moved back to September.
- \* The Chinese Football Association (CFA) has drawn up three plans to complete the 2020 Chinese Super League (CSL) season, one of which would see the campaign begin in late June and finish in December.
- \* The women's Bundesliga season will resume from May 29.
- \* The Portuguese league approved nine stadiums for the league's restart.
- \* Costa Rica became the first country in the Americas to restart their professional league.

\* The women's Under-20 World Cup in Costa Rica and Panama, postponed from August-September, has been rescheduled for Jan. 20-Feb. 6, 2021.

\* The National Women's Soccer League (NWSL) said clubs could begin small group training sessions from May 25. The league is aiming for a late June return with a single city month-long tournament.

**OLYMPICS**

\* The postponed Tokyo Olympic Games will now begin on July 23, 2021 and run until Aug. 8.

\* World Athletics has suspended Olympic qualification until December.

**PARALYMPICS**

The postponed Paralympic Games will run from Aug. 24-Sep. 5, 2021.

**WORLD BEACH GAMES**

The 2021 World Beach Games were moved to 2023.

**WORLD GAMES**

\* The 2021 World Games have been pushed back by a year to avoid clashing with the Olympics.

**ATHLETICS**

\* The World Athletics Championships scheduled for 2021 in Eugene, Oregon have been moved to the summer of 2022 because of the Olympic Games rescheduling.

\* The World Athletics Indoor Championships (Nanjing, March 13-15) were postponed to March 19-21, 2021.

\* Boston Marathon organisers have postponed the race from April 20 to Sept. 14.

\* The London Marathon which was due to take place on April 26 has been postponed to Oct. 4.

\* The Diamond League plans to hold three meetings in August in Monaco, Gateshead and Stockholm followed by September events in Lausanne, Brussels, Paris, Shanghai, and possibly Rome or Naples. Meetings in Eugene, Doha, and China have been scheduled for October.

\* World Athletics released its calendar for the international season beginning with a Continental Tour Gold event in Finland on Aug. 11 and ending with a Diamond League meeting in China.

\* This year's Biathle/Triathle World Championships in Weiden have been moved to 2021.

\* The World Triathlon Series (WTS) event and Mixed Relay World Championships in Hamburg have been rescheduled for the weekend of Sept. 5-6.

\* The Ironman triathlon has been pushed back to Sept. 6 from its original June 21 start.

**AUSTRALIAN RULES**

\* The Australian Football League season will resume on June 11, with four clubs moving to the Gold Coast due to tighter COVID-19 restrictions in their home states.

**BADMINTON**

\* The Thomas and Uber Cup will be held from Oct. 3-11.

\* The 2021 World Championships will begin in late November instead of August to avoid clashing with the rescheduled Tokyo Olympics.

\* The BWF announced a new 2020 calendar with the World Tour set to return with the Taipei Open from Sept. 1-6.

**BASEBALL**

\* The South Korean league started on May 5 without fans.

\* Taiwan's baseball season resumed in April behind closed doors. On May 9, fans were allowed in for the first time, with 1,000 spectators watching games in New Taipei and Taichung.

\* Major League Baseball team owners on May 11 agreed a plan to start playing in empty stadiums in early July.

\* Japan's Nippon Professional Baseball (NPB) league will begin its 2020 season on June 19 with games played in empty stadiums.

**BOXING**

\* Dillian Whyte's heavyweight fight against Alexander Povetkin has been rescheduled for July 4.

**CANOEING**

\* Canoe Slalom World Cups in France and Czech Republic have been tentatively rescheduled to October or November.

.

\* The Canoe Slalom World Cup Final and non-Olympic World Championships in Germany have been moved from September to October.

\* Canoe Polo World Championships in Rome have been pushed back until April 2021.

**CRICKET**

\* English cricket's The Hundred, originally scheduled to begin on July 17, was pushed back to 2021.

**CYCLING**

\* Giro d'Italia will begin on Oct. 3, while the Spanish Vuelta will be held from Oct. 20.

\* Milan-Sanremo will be held on Aug. 8, Liege-Bastogne-Liege on Oct. 4, the Tour des Flandres on Oct. 18, Paris-Roubaix on Oct. 25 and the Tour of Lombardy on Oct. 31.

\* The Tour de France that was due to be held from June 27-July 19 has been postponed to Aug. 29-Sept 20.

\* The European Road Cycling Championships, scheduled for Sept. 9-13, have been postponed by a year.

**GOLF**

\* Tiger Woods and Peyton Manning defeated Phil Mickelson and Tom Brady in a charity golf match in Florida on May 24 at Medalist Golf Club in Hobe Sound, Florida.

\* The Masters at Augusta National Golf Club has been rescheduled for Nov. 12-15 from April 9-12.

\* The PGA Championships at TPC Harding Park San Francisco, has been rescheduled for Aug. 6-9 from May 14-17.

\* The U.S. Open at Winged Foot Golf Club, Mamaroneck, New York, was rescheduled to Sept. 17-20 from June 8-21.

\* The Ladies Professional Golf Association (LPGA) is hoping to get the 2020 season underway with the Dow Great Lakes Bay Invitational from July 15-18.

\* The Women's PGA Championship has been postponed from late June to Oct. 8-11.

\* The Australian PGA Championship will take place at the Royal Queensland Golf Club from Dec. 3-6.

\* The first major of the 2020 golf season got underway on May 14 when South Korea hosted the Korea Ladies Professional Golf Association (KLPGA) Championship. Park Hyun-kyung won the title.

\* World number one Ko Jin-young will take on No. 3 Park Sung-hyun in a charity skins match on May 24 at the Sky 72 Golf & Resort in Incheon.

**HORSE RACING**

\* Racing in France began without spectators at ParisLongchamp on May 11.

\* Horse racing resumed in Germany on May 7 with a limited number of races in front of empty stands in Hanover. Races were also scheduled for May 8 in Cologne.

\* The Kentucky Derby, the first jewel in North American horse racing's Triple Crown (May 2) was postponed to Sept. 5.

\* Churchill Downs, the home of the Kentucky Derby, opened for spectator-free racing on May 16.

\* The British Horseracing Authority (BHA) has said it is planning to resume the season on June 1.

\* Horse racing will be allowed to resume in Ireland without spectators on June 8.

\* The shortened Belmont Stakes will be run on June 20 without spectators.

**MOTOR SPORTS**

\* The NASCAR season resumed with races at the Darlington Raceway in South Carolina on May 17 and May 20.

\* The Le Mans 24 hours race was postponed from June 13-14 to Sept. 19-20.

\* The Indianapolis 500 has been postponed until Aug. 23.

\* MotoGP intends to start its season with races on July 19 and 26 at the Jerez circuit in southern Spain.

\* IndyCar will open its delayed season on June 6 with the Genesys 300 at Texas Motor Speedway (TMS) without fan

s in attendance. The race at St. Petersburg, Florida scheduled for March 15 has been pushed back to Oct. 25.  
\* Formula One hopes to start the delayed season in Austria in July without spectators before ending in Abu Dhabi in December. Silverstone have agreed terms for two races without spectators at the circuit this season.

#### NBA

The NBA is in talks with The Walt Disney Company about restarting its suspended season at Disney World in Florida in late July.

#### NFL

\* The NFL season will begin on Sept. 10 with a game between Super Bowl champions Kansas City Chiefs and Houston Texans.

#### NHL

The National Hockey League has scrapped plans to play regular-season games in the Czech Republic and Finland this year.

The NHL suspended play in mid-March, but hopes to reopen training facilities in June. The league on May 24 released a set of safety protocols that allow players to return to clubs for small-group workouts.

#### RUGBY

\* Australia's National Rugby League is set for a May 28 restart after players agreed to 20% pay-cuts for the abridged 2020 season.

\* Rugby Australia hopes to get players back in training in June for matches in July.

\* New Zealand's five Super Rugby teams will play each other in a 10-week domestic competition from June 13.

\* The Mitre 10 Cup, New Zealand's annual provincial competition, will start with a full 14-team championship from Sept. 11.

\* Rugby Australia are looking at potentially including both the Western Force and Japan's Sunwolves in a competition with their four Super Rugby sides to start in early July.

#### SNOOKER

\* The World Snooker Championship, originally scheduled to begin on April 18, will start on July 31 at the Crucible Theatre in Sheffield.

\* Snooker will resume in the United Kingdom on June 1 with the Championship League event which will be held without fans at the Marshall Arena in Milton Keynes.

#### SWIMMING

\* The 2020 European Aquatics Championships scheduled to take place from May 11-24 in Budapest, Hungary, have been postponed to next year.

\* The World Aquatics Championships, scheduled for July 16-Aug. 1, 2021, were pushed back to May 13-29, 2022.

\* The World Swimming Championships in Abu Dhabi, scheduled to take place in December, have been pushed back by a year.

#### TENNIS

\* The French Open was postponed until Sept. 20-Oct. 4.

\* The women's Rogers Cup tournament in Montreal was postponed until 2021.

\* Professional tennis returned with the Tennis Point Exhibition Series event in Germany on May 1.

\* Hubert Hurkacz, Miomir Kecmanovic, Reilly Opelka and Tommy Paul took part in the UTR Pro Match Series in Florida that began on May 8.

\* Patrick Mouratoglou's tennis academy in France will host a five-week series starting in May.

\* Bianca Andreescu and Sofia Kenin will be among 16 WTA players who will launch the Credit One Bank Invitational in Charleston on June 23.

\* Novak Djokovic is bringing together some of the world's top tennis players for a series of matches to run from June 13-July 5 in the Balkan region.

\* New Zealand will stage a team-based tennis tournament for local-based men's players from June 3.

\* World TeamTennis, an innovative mixed-gender professional tennis league, will start from July 5 at the Greenbrier, West Virginia, and up to 500 fans will be allowed to attend matches.

#### ULTIMATE FIGHTING CHAMPIONSHIP

\* UFC action returned with three cards on May 9, May 13 and May 16.

List of sports events that have either been cancelled or postponed due to the outbreak:

#### OLYMPIC TRIALS

\* U.S. trials for wrestling (April 4-5) were postponed.

\* U.S. Rowing postponed its team trials.

\* U.S. diving trials (April 3-5) were postponed.

#### NORTH AMERICA

\* The MLB has further delayed its 2020 season's opening day of March 26.

\* The Women's National Basketball Association postponed the start of its 2020 regular season, originally scheduled to run from May 15-Sept. 20.

\* The 2019-20 American Hockey League (AHL) regular season and the 2020 Calder Cup Playoffs were cancelled. The AHL standings at the time of suspension will be used to determine league awards.

#### SOCCKER

\* FIFA has agreed to delay the first edition of its revamped Club World Cup due to be held in 2021.

\* UEFA put all club and national team competitions for men and women on hold until further notice.

\* The men's and women's Champions League finals and Europa League final originally scheduled for May have been postponed.

\* South America's two biggest club competitions, the Copa Libertadores and Copa Sudamericana, are suspended.

\* CONCACAF suspended all competitions, including the Champions League and men's Olympic qualifiers.

\* Asian and South American qualifying matches for 2022 World Cup were postponed.

\* Japan's J.League will not hold any games in May.

\* Barcelona's women's team were declared champions of Spain's Liga Iberdrola after the national soccer federation's executive committee agreed to end all non-professional competitions.

\* The Asian Football Confederation on April 14 postponed all matches and competitions scheduled for May-June until further notice.

\* Semi-finals of the CAF Champions league (May 1-3) and CAF Confederation Cup (May 8-10) were postponed.

\* This year's International Champions Cup, a pre-season tournament featuring Europe's top clubs, was cancelled.

\* Cameroon cancelled the rest of its league season and declared leaders PWD Bamenda as champions.

\* Wales' top flight league was called off and Connah's Quay Nomads were crowned champions.

\* Mexico cancelled the remainder of its men's and women's seasons. No champions will be crowned.

\* England's Women's Super League and second-tier Women's Championship seasons were cancelled on May 25.

#### ATHLETICS

\* The Diamond League, the elite track and field competition, was forced to cancel its London meeting scheduled for July 4-5. It had previously postponed events in seven cities scheduled between April and June.

\* The Paris and Barcelona marathons were postponed.

\* The 2020 European Athletics Championship due to take place from Aug. 25-30 were cancelled.

#### BADMINTON

\* The Badminton World Federation (BWF) cancelled the last five tournaments in the qualification period for the Olympics.

\* The Indonesia Open (June 16-21) was among a host of events that have been cancelled while tournaments over th

e next three months were also suspended in Australia, Thailand and Russia.

\* The U.S. Open, set to be held from June 23-28 in California, was suspended.

#### BASEBALL

\* The final qualification tournament in Taiwan for the Olympics was put back from April to June 17-21, while the March 22-26 qualification event in Arizona was postponed.

#### BASKETBALL

\* The International Basketball Federation postponed the men's Olympic qualifiers, European Championship and the Americas Championship by a year.

\* Turkey cancelled its basketball season on May 11.

\* Europe's top two club basketball competitions, EuroLeague and EuroCup, have been terminated without naming any winners.

#### BOXING

\* Anthony Joshua's world heavyweight title defence against Bulgarian Kubrat Pulev at Tottenham Hotspur's stadium on June 20 was postponed.

#### CRICKET

\* The Indian Premier League, originally suspended until April 15, has been postponed indefinitely.

\* The last two games of Australia's three-match one-day international series against New Zealand in Sydney and Hobart were cancelled while the limited-overs tours were postponed.

\* The boards of India and South Africa agreed to reschedule a three-match ODI series to a later date.

\* England's test series against Sri Lanka and West Indies were postponed. The England and Wales Cricket Board extended the suspension of the professional game in the country until July 1.

\* South Africa's limited-overs tour of Sri Lanka that was scheduled to take place in June has been postponed.

\* Australia's proposed test tour of Bangladesh in June has been postponed.

\* Ireland's home series against New Zealand and Pakistan scheduled for June and July have been postponed.

#### CURLING

\* Men's and women's world championships in Scotland and Canada respectively were cancelled.

\* World mixed doubles and senior championships in Canada, scheduled from April 18-25 were cancelled.

#### CYCLING

\* The final two stages of the UAE Tour were cancelled after two Italian participants tested positive.

\* The Paris-Nice cycling race ended a day early after the eighth stage into Nice was cancelled.

\* The Women's Tour, scheduled to take place from June 8-13 was cancelled.

\* This year's Tour of Britain scheduled for September has been cancelled.

#### GOLF

\* The British Open Championship was cancelled.

\* The European Tour cancelled the BMW International Open (June 25-28) and the Open de France (July 2-5). The Scottish Open (July 9-12) was postponed. The Tour had postponed or cancelled events scheduled between March and May.

\* The LPGA cancelled Tour qualifying "Q-schools" this year as well as the Meijer LPGA Classic in Michigan.

#### HANDBALL

\* The German handball season was cancelled after top clubs voted in favour of abandoning the campaign.

\* The men's and women's EHF Cup and Challenge Cup were cancelled.

\* The remaining women's Euro 2020 qualifiers as well as European playoff matches for the 2021 men's world championship were cancelled.

#### HORSE RACING

\* The Grand National festival (April 2-4) was cancelled.

\* The Dubai World Cup, one of the world's richest horse races and a premier annual sporting event in the United Arab Emirates, will not go ahead this year.

\* The Guineas Festival at Newmarket in May and June's Epsom Derby have been postponed while June's Royal Ascot may be held without spectators.

\* This year's Shergar Cup, due to take place on Aug. 8, has been cancelled.

#### MOTOR SPORTS

\* NASCAR postponed events at Kansas Speedway May 30-31, Michigan International Speedway June 5-7, the NASCAR Xfinity Series race at Mid-Ohio May 30, and the Gander Trucks Series race at Texas Motor Speedway, previously scheduled for June 5.

\* The Bretagne World Rallycross at Loheac, scheduled to take place on Sept. 5-6, has been cancelled.

\* This year's Silverstone Classic, scheduled for July 31-Aug. 2, has been cancelled.

#### NETBALL

\* Netball Superleague fixtures were postponed until at least May 31.

#### ROWING

\* The 2020 US Rowing National Championships scheduled for July and the 2020 US Rowing Masters National Championships scheduled for August have been cancelled.

\* British Rowing extended the suspension of all its events to July 31. The British Rowing Offshore Championships & Beach Sprints and British Rowing Junior Championships have been cancelled.

#### RUGBY

\* Four Six Nations matches were postponed.

\* France's rugby federation suspended all its competitions and will not be allowed to return until September.

\* The European rugby season was suspended after European Professional Club Rugby postponed Champions Cup and Challenge Cup quarter-final matches (April 3-5).

\* The semi-final and final of this season's Champions Cup and Challenge Cup tournaments, which were due to take place in Marseille in May, have been postponed.

\* England's Rugby Football Union and Wales' governing body confirmed the end of the 2019-20 season for all league, cup and county rugby, but the English Premiership has been excluded.

\* Super Rugby suspended its season.

\* World Rugby has postponed all test matches scheduled for July.

\* This year's Rugby League Challenge Cup final, scheduled for July 18 at Wembley Stadium, has been postponed.

#### SURFING

\* The World Surfing League extended the postponement of events through June while also announcing a major overhaul for future tours, with details on a post-season surf-off to be announced in July.

#### TABLE TENNIS

\* The International Table Tennis Federation (ITTF) scrapped all table tennis competitions until the end of July.

#### TENNIS

\* The Wimbledon championships were cancelled for the first time since World War Two.

\* The Fed Cup finals (Budapest; April 14-19) were postponed.

\* The Sept. 25-27 Laver Cup was cancelled to avoid a clash with the re-scheduled French Open.

\* ATP events in Hamburg, Bastad, Newport, Los Cabos, Gstaad, Umag, Atlanta and Kitzbuhel will not go ahead as scheduled while WTA events in Bastad, Lausanne, Bucharest and Jurmala scheduled for July will not be held.

#### VOLLEYBALL

\* The international volleyball federation (FIVB) cancelled this year's Volleyball Nations League, which was sch

eduled to begin on May 19 for the women's competition and May 22 for the men's event.  
\* Turkey cancelled its volleyball season on May 11.

#### WINTER SPORTS

- \* The International Ski Federation cancelled the final races of the men's Alpine skiing World Cup.
- \* The World Cup finals in Cortina were cancelled along with the last three women's races in Are.
- \* The women's world ice hockey championships in Canada were cancelled.
- \* The Ice Hockey World Championship scheduled for Switzerland in May was cancelled.
- \* The speed skating world championships in Seoul were postponed until at least October.
- \* The March 16-22 world figure skating championships in Montreal were cancelled.
- \* The Kontinental Hockey League (KHL) has cancelled the remainder of its season after temporarily suspending its playoffs.

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By Ajay Bidyarthi - June 22, 2020 7343

The COVID 19 pandemic has reshaped the fundamental fabric of our world. Initiating in China in late December 2019, the virus has since then spread to every corner of the world, infecting millions in its wake. Countries around the world have responded by shutting down their economies and advocating lockdowns of varying degrees. India has arguably had one of the most stringent lockdowns of all countries, restricting the movement of people, goods and effectively transforming every city into a ghost town.

Due to such stringent restrictions on movement, the economy has received a fatal blow. The virus arrived in Ind

ia at a time when the country was already in strife, dealing with a slowing GDP growth rate and an ever-increasing fiscal deficit. The lockdown has simply exacerbated the economic predicament; pushing multiple businesses and industries to a moribund state. Other countries have also faced a similar predicament, particularly in the US and Europe, both being hotspots for virus transmission.

However, upon taking a closer look at the global economy, there seems to have been an upward mobilization in some of the sectors in the IT domain. These sectors seem to have exorbitantly increased their scale of operations and have overall reaped hefty profits. So what is it that differentiates these areas from the rest and what can we learn from them?

#### A path to victory

If we look at the evolving IT/ITeS industry around the world, the domains that have flourished in this strenuous time all have had one key characteristic in common; flexibility. These sectors have adopted a more flexible approach to dealing with the lockdown. Be it flexible working procedures or adopting newer, more advanced ways of working in line with the requirements of our time, they haven't shied away from changing the rules of the game. Let's look at some of these areas within the tech domain that have been successful in conquering the lockdown.

#### Social Media

Lockdowns around the globe have confined people inside their homes, with nothing much to do of significance. As a result, social networking sites have reported a gigantic rise in user engagement over the lockdown period. Reportedly, there has been close to a 50% rise in daily text transmissions across messaging platforms such as Facebook, Instagram, and WhatsApp in the hardest-hit economies. Twitter has reported a 23% increase in its user base as compared to last year. The data makes it evident that social media platforms are here to reap the benefits of a lockdown situation.

Video consumption sites such as YouTube, Instagram, and TikTok are in line to reap massive profits. It's no wonder that viewership on these platforms has increased manifolds due to lockdowns. These platforms serve to be a distraction from the tragedies of the real world in such stressing times and offer an easy escape. Be it rumors regarding the cure for COVID 19, gossips, or rap battles; these platforms provide viewers with their much-needed dose of distractions. As they say, "ignorance is bliss".

#### Data-Mining Enterprises

The lockdown has proven to be a miracle for data-mining companies. With such an exorbitant increase in the number of hours spent online globally, these firms now have access to significantly larger sets of data than they otherwise could ever have. Widespread implementation of data-mining has been seen recently with most countries opting for Government-regulated surveillance applications that monitor your movement at all times. Moreover, these applications have access to your personal information as well as medical records. Countries such as South Korea and Singapore are at the helm of relying on such means to control the outbreak.

Although noble, such initiatives do raise a red flag with regards to user privacy. The public has been provided with very little information about how these applications operate and what goes on behind the scenes. This creates an atmosphere of obscurity that is frankly harmful to the premise of a democracy.

#### Cloud Computing

Cloud computing has been on the rise for the last couple of years. However, the pandemic has made it the de facto king in terms of computational services. With an increasing reliance on remote working, the ability to store data in one secure location has turned out to be critical.

The cloud computing services such as Amazon Web Services, Microsoft Azure, and Google Cloud have reaped hefty profits in the process. The emerging landscape in the tech world seems to suggest an upward trend in reliability on these services as far as large scale data storage and computing is concerned.

#### E-Commerce

Social distancing measures have made it practically impossible for people to physically go shopping for groceries and other necessities. Moreover, a majority of retail outlets in cities have reported negligible engagement, for the fear of transmission of the virus. E-commerce sites have been the real winners in this predicament of global consumerism.

With high standards of hygiene and at-home delivery, these sites have provided an easy alternative to retail stores. Other similar businesses include food delivery apps and grocery sites that are also flourishing today amidst the pandemic. Recent weeks have made it evident that E-commerce websites are well on their way to abolish traditional shopping methods.

#### OTT Platforms

Online streaming platforms consist of a relatively newer approach to entertainment; having only been in existence for the past couple of years. They had already, however, established a name for themselves before the lockdowns. Sites such as Netflix and Amazon Prime had been dominating a chunk of the market share and competing heavily with movie theatres for new releases, for a while now. Now with the lockdown practically deleting theatres and cable TV from the collective psyche of the entertainment industry, they are well on their way to becoming the platform of choice as far as entertainment for the masses is concerned.

This has already become evident, with Zee5 India reporting a whopping 80% increase in subscriptions and a 50% increase in the time spent on their site, within the first couple of weeks of the lockdown itself. Another such platform MUBI reported a 28% rise in its viewership in India only a week after lockdown commenced. These facts are a clear indication of the exponential growth that is in store for these platforms, which is unlikely to change anytime soon.

#### Video-Conferencing Platforms

The idea of working from home is all set to be the new norm in our professional culture, which requires an easy and effective way to communicate over the internet. Not just audio or text, but video conferencing is the need today. Hence it's understandable why multiple video conferencing services are set to reap massive profits off of the new norm.

Arguably the most popular of these, Zoom has reported a 130% increase in its price share since the beginning of 2020. Another such platform known as the Microsoft Teams collaboration suite, operated by Microsoft, has reported a whopping 12 million increase in its user base in the very first week of the lockdown in the US. This data is only likely to have an upwards trajectory considering the increasing pace at which industries are going online.

#### The Indian Picture

The Indian IT landscape has also undergone massive cultural changes. According to Rajesh Gopinathan, chief executive officer and managing director of Tata Consultancy Services Ltd., the "work from home" model of operations is here to stay. He also claimed that the firms only require a 25% workforce to be physically present for any project at any of the locations.

Tata Consultancy Services which is one of the major players in the Indian IT landscape has shifted almost 90% of its workforce into a remote borderless workspace model, and other smaller firms have followed suit. What it tells us is that we're headed in a direction we're unlikely to return from. Remote working appears to be the modern protocol for operations and is unlikely to change anytime soon.

However, a major challenge often overlooked in such circumstances is that of an adaptable culture. The culture of workspaces has to be drastically altered and members of the workforce have to dive headfirst into the new way of doing business. This is critical to ensure that the industry can combat the pandemic and recover gloriously.

A duality unlike any other

The lockdown has presented us with a stark contrast unlike any other we've witnessed. Where on the one hand, the industries mentioned above seem to be exhibiting exponential growth with their people thriving and having every possible resource at their disposal, the unorganized sector and the MSMEs (Micro, Small and Medium Enterprises) seem to be at the crux of death.

The sector that consists of people for whom having guidelines to work from home is irrelevant as that was never really an option; people with no fixed wages or social security to fall back on during this time of crisis. As a result of the lockdown, several of these MSMEs have effectively become inoperable and have resorted to massive layoffs just to survive. This has resulted in thousands of workers losing their jobs with nowhere to go for refuge. A chunk of these people includes migrant workers who have lost their jobs and are left with little to no avenue to feed themselves. Not receiving significant support from the government, these people have been initiating treks back to their villages. What is witnessed is a massive influx of migrant workers flooding the highways, walking weeks to find shelter and food. Truck drivers responsible for delivering goods have also resigned stating that they have no means to eat because of the closure of every food joint on the highways. Both these realities present a stark contrast and expose a deep crack in our societal framework. One I reckon won't heal anytime soon.

#### A train Unlikely to Halt

The COVID 19 pandemic has restructured our social fabric in a way that is unlikely to change anytime soon. The areas that we've discussed are likely to become the flagbearers of the digital revolution of the decade. An upward mobilization with regards to massive scale movement of industries online seems pertinent today being led by these domains in the IT industry. An unfortunate consequence of it is that a majority of the MSMEs may soon cease to exist, having been replaced by some of the other alternatives that we've discussed. It seems to be a never-ending circle where the ones who are making a profit out of this situation will continue to do so, while the others will be washed out from our collective memory.

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## Introduction

A video game is any software program that can be played on a computing device, such as a personal computer, gaming console, or mobile device. Video games have been in existence since the early 1970s and have become increasingly popular, spanning different mobile (smartphones, tablets) and stationary (computer or console) platforms. Advances, particularly in mobile devices, have given birth to social networks and group gaming. Although the nature of gaming does not require physical stamina and therefore is not limited by factors such as age, gender, or fitness, it is most popular with adolescents. In 2018, the World Health Organization (WHO) classified gaming disorder in their International Classification of Diseases (ICD-11). The ICD-11 is a list of diseases and medical conditions that aids health professionals in making diagnoses and treatment plans for patients having various disorders. It should be noted that, the inclusion of gaming disorder in the ICD-11 by WHO has generated vigorous and sometimes contentious debate and discussion within the medical and mental health community. Although recognized as an area of clinical interest, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) published by the American Psychiatric Association suggests that more clinical research is required before Gaming Disorder is formally considered as a psychiatric disorder. Similarly, the WHO notes the inclusion of gaming disorder in ICD-11, to encourage more research into excessive gaming behavior, including its prevention and treatment.

### What is Online gaming disorder?

2018 WHO draft 11th Revision of the ICD-11 denotes the disorder as a pattern of "digital-gaming" or "video-gaming" behavior characterized by impaired control over gaming activity, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and the continuation or escalation of gaming despite the occurrence of negative consequences.

Online Gaming disorder has the same similarities with Internet gaming disorder (IGD), which is a condition that the American Psychiatric Association (APA) noted in DSM-5 as an area in need of additional study. The APA does not currently recognize IGD as an official condition. For gaming disorder to be diagnosed, the WHO criteria require that the behavioral pattern of the gamer must be of sufficient severity that major and noticeable impairment and deterioration in personal, family, social, educational, occupational or other important areas of functioning is present for a minimum of 12 months.

### Signs and symptoms of Online gaming disorder

According to the WHO definition, a person with online gaming disorder will demonstrate the following characteristics for at least 12 months; problems controlling control their gaming habits, seeing gaming as more important over other necessities and daily activities or work, continuing to engage in gaming even after its negative health and social problems has been identified or are evident. Further research shows that gaming disorders can also be linked to anxiety, depression, obesity, sleeping disorders, and stress. People who remain physically inactive for long periods because of gaming may also be at higher risk of obesity, sleep disorders, and other health-related issues, according to WHO [1].

### Health consequences of video Online gaming

Video game-related health problems can cause continuous strain injuries, skin disorders, and other health issues. Other problems according to Shoja et al. (2007), include a condition that could be termed video game-provoked seizures in patients with pre-existing epilepsy. The following health consequences of video gaming have been reported.

### Vision issues

Video game playing is associated with eye problems. Extensive and fixed staring at a video game screen causes eyestrain because the cornea, pupil, and iris are not biologically equipped for chronic heavy viewing of digital images from electronic devices. The visual system strain from frequent video game use over extended periods may result in headaches, dizziness, and in some cases, nausea and vomiting. Interestingly, there is some research that shows that gamers have an enhancement of spatial distribution of attention, compared with non-gamers. This somewhat predictable practice effect occurs with both peripheral and central visual attention. For sufferers of amblyopia (dimness or blurring of the eyesight due to a fault in transmission from the eye to the brain) video games may be helpful.

### Musculoskeletal problems

Persistent gamers may also suffer from musculoskeletal problems. A survey of children indicated increased physical complaints associated with video game playing. Such complaints range from pain in the hands and wrists to back and neck. Furthermore, a case report involving a nine-year-old teenager referenced Playstation thumb. Playstation thumb is, characterized by numbness and a blister is caused by friction between the thumb and the controller from rapid and persistent gameplay. Using dermoscopy, dermatologists discovered hemorrhages and onycholysis (the loosening or separation of a fingernail) in a patient who presented with hyperkeratosis. Also, tendon injuries (tendinosis) of the hands and wrists from tendon overuse, is another health problem associated with video game playing. Furthermore, another case report in the New England Journal of Medicine reported a fracture of the base of the fifth metatarsal from people who play Wii video games. This condition has been termed (perhaps sarcastically), a Wii fracture. There are also postural problems associated with the persistent playing of video games, although, ergonomic measures (including chair to monitor position) could potentially improve postural problems associated with video game playing.

### Obesity and overweight

Playing video games consistently has been associated with obesity. This is maybe related to the lack of physical activity in players. Alternatively, it could be that those who are less physically fit because of obesity gravitate towards less physically demanding activities, such as gaming. In either case, several studies have linked television and video games and increased Body Mass Index (BMI). It has been estimated that children in the United States spend 25% of their waking hours watching either television or playing video games. Furthermore, children who watch the most hours of television or play video games have the highest incidence of obesity. If video games are replacing physical activities and young people do not participate in physical recreation or see playing of video games as a form of recreation, this may be part of the link between times spent while playing video games and a rise in BMI in teenagers. Evidence for this potential link gains some support from a German study reporting that boys who spend no more than 1.5 hours per day engaged in television watching or playing video games, were 75.4% less likely to be overweight than those who spend more than 1.5 hours engaged in the same activity.

In a 2011 study, an association between video game activity and an increase of (mostly junk) food intake was reported. Specifically, single video game sessions caused an increase in food intake, regardless of appetite. It has also been suggested that active video game play using two popular gaming platforms has the opposite effect. Other researchers found no evidence that more active video games would result in a beneficial outcome although the study did demonstrate an increase in the amount of physical activity within the children receiving the active video games.

### Seizures (Epileptic)

Health concerns that video games may cause epileptic seizures started in the early 1980s. The first medically d

ocumented case of a video game-induced seizure was reported in 1981. In 1993, a story in the popular press (Sun newspaper) reported that a boy choked to death on his own vomit during a seizure triggered by playing a video game. Similar but less serious incidents were subsequently reported by news media around the world, ultimately motivating video game console manufacturers to include that epilepsy warnings in the instruction manuals for their gaming products. In 1994 it was reported that video games only cause seizures in people already predisposed to epilepsy and advised that people with a predisposition to epilepsy can greatly reduce the risk of a seizure by staying 10 feet or more away from the TV set and wearing sunglasses while playing video games. This is clearly an area in need of additional research.

#### Prevention and treatment of online gaming disorder

The cost: benefit value of prevention versus treatment of addiction disorders has been known for many years. It is important and beneficial to make use of several types of strategies in combating gaming addictiveness or disorder. Effective strategies include: educating gamers about gaming behaviors and consequences on their mental health; treatment geared towards helping the gamer to control his/her urge for video games, recognizing and dealing with disturbing thoughts and learning how to cope without video games; intrapersonal and interpersonal counseling to help gamers to explore their identity, build self-esteem, and enhance their emotional intelligence outside the fictional world of gaming and learning communication and assertiveness skills needed in social interactions; family involvement, including counseling and discussion family and other relationships; and developing new lifestyles. The latter is particularly important and to paraphrase the well-known mantra of Alcoholics Anonymous, it's all about, people, places, and things. To prevent the persistent playing of video games, people need to explore new activities, set new goals and metrics of achievements beyond video game scores.

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By Ajay Bidyarthi  
July 1, 2020  
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What is changing?

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Finding ways to make using the Internet easier is something most modern consumers are passionate about. Since the rise of AI-infused technology like Amazon's Alexa or Apple's Siri, voice search has grown increasingly popular. In fact, nearly 60 percent of people all over the world use voice search at least once a day. As this technology grows more popular and complex with each passing day, business owners are starting to take notice of voice search. Capitalizing on this trend is only possible when optimizing the content on your website for voice search. Are you trying to make your website more voice search-friendly? If so, check out the following tips.

#### 1. Accuracy of voice search

In the past, if you wanted relevant answers from a voice recognition technology, well—good luck with that. But today, machine learning systems can compete with people in terms of accuracy. Google's voice recognition, Google is now able to understand human language with 95 percent accuracy. These improvements mean that, while you can trust good voice systems to match customers with the right products, services, or information with increasing degrees of nuance, leading businesses already have set customer expectations for delivery. Thanks to machine learning algorithms that can detect speech and respond with meaningful results.

#### 2. The interest in voice is only going to grow

Because voice search systems are at a point where they actually can perform reliably and meet customer expectations just as well (if not better) than traditional query options, customer trust in them is growing: 60% of 18-to-49-year-olds talk to automated voice systems at least once a day. Voice shopping is expected to reach \$40 billion by 2022—up from \$2 billion in 2018; global smart speaker sales expected to exceed \$30 billion by 2024. 30% of people who don't have a voice assistant would like to buy one. 50% of smart speaker owners would like to get information about deals, sales, and promotions.

Yet, only 4% of businesses are properly optimized for voice search. What's with the disconnect? In other words, business leaders are at an ideal intersection where reliable systems are available and there are still many customers who haven't been reached or who might want more out of the systems they currently use. Bringing those systems and customers together will help companies avoid being left behind.

#### 3. People are after convenience and all types of information

When people use voice search, they don't just want to locate a great pair of shoes or a TV. People want all kinds of other information, such as your store hours, how to connect to support specialists, and when you're having your next sale. This is partly why some experts have predicted a "totally different internet" within the next five to 10 years, one where voice-activated chatbots have all but replaced the e-commerce channels we're used to using.

Shoppers are also after general tips that can take some of the friction out of everyday life—think life hacks and how-tos. In fact, words like "how," "what," "best," and "easy" are among the top voice search queries. This means that when it comes to online marketing, you probably need to change your entire optimization approach, taking elements like grammar and semantics, the structure of your site, and structured data markup that influences Google's ability to find your content. Of course, optimizing from the start, not as an afterthought, is ideal.

#### 4. How Voice become part of customer-brand interactions

Voice Search can be used on both desktop and mobile searches. We can see that customers want different types of information from voice systems, they also can use it at many points in the customer journey. For example, about half of shoppers use voice to research products, even "near me" searches results are mostly done by customers. Customers also use voice to:

Add items to shopping lists (36%) Track packages (30%) Make a purchase (22%) Give a rating or review (20%) Contact support (18%) Reorder something (17%)

These statistics show you should think beyond just having customers find you or your products. Voice search and commands can take your buyers from start to finish, so give your customers as much convenience and satisfaction as possible by integrating voice options into more types of interactions.

#### 5. Voice is often just the starting point

A survey showed that, once a consumer makes a local voice search, their next most common action is to call the business (28%). Customers also are highly likely to visit company websites (27%), show up at the company's location (19%), and do more research into that business or additional businesses (14% and 12%, respectively). So, in short, while voice services can allow a customer to complete many steps without human interaction, you shouldn't see it as a total substitute. Many people are going to take further steps after the initial search, and they still will want to hear a human voice respond back once in a while. They are going to have more questions, and they're willing to physically connect with you and what you offer. Don't drop the ball in other areas, like making your site aesthetically pleasing and easy to navigate, having enough staff ready to chat, listing an accurate contact number, or keeping your store well-stocked. Voice search already is shifting the way customers engage with brands, but there's still time for companies of any size to get involved with voice systems in ways that can benefit both the customer and the business's bottom line. The next step is to find voice search solutions. However, as with other technologies, these are not necessarily one size fits all, meaning it's critical to shop around and be specific about your goals. If you can customize and update your options in a scalable way, they'll be even more effective for your business.

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By Ajay Bidyarthi - August 15, 2020 6531

The pandemic has shaken the world in the way one had hardly imagined. The impact of it on Jobs and Services is going to be long-lasting and it will be the foundation stone of revolution in these sectors. With the work from home and social distancing norms is altering the way of work, the way we interact, what work we will do, how the work will be done, and whatnot. To just give an example, in the middle of the first lockdown, FMCG major Hindustan Unilever (HUL) went ahead with its merger. It took place online entirely. Yes, it took place online. Who could have ever imagined the merger can take place online?

Change is inevitable. But some changes are temporary and some are permanent. The pandemic is bringing changes that are going to be permanent. In fact, these changes were due for a long time and we're coming at a slow pace. What the pandemic has done is, it has become the catalyst for these changes and raised the ante for change. So, what exactly the changes will be? Let's look at them one by one.

The first change is going to be the extensive use of digital communication from now onwards. The Zoom, Jio Meet, Google Meet, and some derivatives like these are going to be the forever meeting rooms where the important di

scussions will be held. This may be bad news for the employees who are older than 40 years. They would not have pictured themselves doing such transformation at this part of life. Experts believe that the new normal in the offices are going to be hierarchy-less. The older employees would have to work with the younger ones. There would be no geographical boundaries and where the communication and software adaptability among employees is going to be crucial. The symbol of power will be less visible and the decentralization of power in the office will be prominent. There will be more egalitarianism in companies. The corporates will think much more about office space. Rather than expending too much on physical infrastructure, the online infrastructure will always be in their hindsight. The impact would be more prudent in small and mid-sized businesses. The physical offices itself might disappear from such businesses. But it's not going to be easy for companies. The security and confidentiality of the authentic information going out of the offices' building are going to be the largest concern in the new normal world. There would be no surprise if a lot of start-ups will bloom in the near future providing software for security for the data and information of the companies. Also, travel is going to be reduced. So, the major component of CTC where the companies fooling the employees must find the other way.

The second change is going to be struck down on employees. Already many of the companies and start-ups are reducing the workforce. It is expected that new normal offices would work with an 80% workforce of that of the current workforce. Automation is on the verge. Due to safety reasons, the companies are going to be more and more leaned towards automation with a minimal touch of human possible. This might result in a loss of jobs in some sectors, but it will also create new jobs in the automation sector. It was evident from before pandemic too but now the velocity for the same would be increased. In the new normal tech-enabled world, the job which would be at stake dominantly would be managers' managers. The IT firms have started firing the vice presidents and assistant vice presidents who draw hefty salaries but don't really drive the business. In the designation-less set up in the near future accelerated by Pandemic, they automatically become redundant. For the first time, the employees might be given jobs that would require more than the standard jobs. Also, when the workforce in the company would be less in the company, the employees might be given the option of working for extra time or working on the weekends and would be incentivized for the same rather than employing more staff and paying them full salary. It is a win-win situation for both employees and companies. Employees can earn more than what they usually earn and will get to learn new which would be out of their primary domain. The companies would be able to keep their costs low through this. The assessment of employees might change too. Rather than going for an annual performance review, the employees might be evaluated based on the tasks they perform. Creativity and innovation are going to be swords for the employees in the new normal world rather than designations in the office.

The other change might be in the services sector. The services like which involves maximum human touch will be the one which will be affected most adversely. The safety concerns and confidence of people over the system are going to be the issue for at least the next few years. It also opens the opportunity for something very new. The products which could replace the need for visiting such services centers are going to create a boom in the market. According to McKinsey, the sales for such products are multiplying rapidly.

There are speculations that the economies will tend to become Minimalist economies. Let's dig deep into this. Minimalist economies are the economies where people tend to refrain from purchasing luxurious items and focuses on purchasing necessities more and more. Well, this is the position we are in right now during the pandemic. People are expensing only necessary items like groceries and the demand for luxurious items is way below average. But it would be hard to stay the same as this. The minimalist economy will result in the deterioration of the economy in the short term. It is true that in the minimalist economy the demand might be low, but it would be wrong to assume the demand will be zero. The high-quality products will gather the attention of the purchasers. It is evident from past experiences that the economy always finds its way to come back from the mode of minimalist economy. Though this time may take some time, it will surely return on track.

But every trouble comes with an opportunity. This is the time for the companies to act now and grab the opportunities the pandemic has brought with him. But for that companies are required to follow plans, formulate strategies to suit their needs, and pay more attention to the innovation. The companies must form plans for the five stages from here. These stages are 5Rs: Resolve, Resilience, Return, Reimagination, and Reform.

**Resolve:** In the resolve phase companies need to formulate a nerve center to combat Corvid itself. The tendency of the company should not be like that, they will return only after everything becomes normal. In most parts of the country, permission is granted to the companies for their operations. If they wait for normalcy, then bankruptcy might catch them before the normalcy.

**Resilience:** The resilience phase includes maintaining liquidity, addressing solvency, and grow for sustainability. All businesses should know when their cash crunch is coming. Addressing these cash crunches will be crucial for the companies. Businesses must take aggressive options to remain solvent. For example, the businesses might have cash in their hand but might be poor in operational efficiency then it requires the attention of the company. Organizations solving issues of liquidity and solvency will be in a better position to grow with sustainability.

**Return:** In the third phase of return the companies will have to plan for the time when everything will be back on track. Given the possibility of subsequent waves of coronavirus the companies need new ways of working to prevent, identify, report, and contain future flareups. Many industries will face this problem of returning. Staying prepared for resurgence scenarios should include a multi-scenario modeling exercise. Reverting to non-COVID-19 care will require extensive planning and market testing.

**Reimagine:** The phase of reimagining will include the learnings from the pandemic. A small virus and the whole economy at the toss. The businesses will have to introspect them and must look for advancements in technologies such that this kind of pandemic in the future will not disturb their efficiency too much. The pandemic has taught us that the decision which took weeks and months in the normal world can be accelerated and can be taken in some days. This should become a permanent feature. Cross organizational collaboration has become much easier. This should stay in the long run.

**Reform:** The last phase is the reform. In this phase, the companies should look at their bottlenecks and try to fix them. Also, the companies will have to reconsider their relationship with their customers. The confidence in their brands, they must regain it.

There are three ways to shift work, talent, and skills to where and when they are needed most, thereby building the organizational resilience and agility necessary to navigate uncertain times and rebound with strength when the economy recovers.

**Make work portable:**

In this dismal situation it is more important than ever most of the staff should be in the critical tasks. The tasks could be like the customer complaints redressal. We know that the customers are the ones who make the businesses successful. Thus, retaining their confidence is the utmost priority. The organizations can convert some of the staff to address the queries and concerns of customers. The organizations require to create virtual offices. There should not be the geographical boundaries within the organization. The employees from all over the world from the organization should come together and take the organization back to pre-corvid state. By breaking out of rigid job constraints, the right talent and work can be matched to solve evolving business challenges in real-time.

**Accelerate Automation:**

This was happening before the pandemic too. But accelerating it with pace has now become the need of the hour. The perception that automation is a job-killer is totally wrong and in fact, it is the mandatory capability to deal with the crisis. Organizations can increase automation in call centers. This will reduce the response time

Share employees in cross-industry exchanges:

Temporarily moving employees from some industries like airlines, restaurants, hospitality can be moved to those organizations which have maximum work at this time like healthcare and logistics.

To conclude, the companies should understand "Lives come first, but livelihood matters". The pandemic will have some adverse effects on jobs and services, but this is not the end. The pandemic has brought many opportunities with him and if they are grabbed then the organizations would be in much better position even compared to pre-corvid situations. The companies need to understand the pandemic is not going to be forever. The last concluding sentence will be corona will bring changes but there will not be a revolution in jobs and services.

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By Ajay Bidyarthi - August 15, 2020 6626

Social media is such a staple of our evolving digital culture that it's almost hard to imagine a time without updates, likes, comments, and shares. People are more concerned about how their food looks than about how it tastes. Thus, it has become necessary for any brand to have a social media presence. The phrase "Out of sight, out of mind" has never been so apt than in today's time. Social media is as much about engagement with other people as it is about sharing content. It's why we call it "social" media.

Social media engagement simply is the interaction between the customer and the brand on social media platforms. Where else are you going to find a huge database of your target demographic who are already in the mind frame to read, click on, and share your message?

In practicality it is not about a one-off communication but more about the construction of a long-term relationship with your target customers. Hence, when we talk about such a relationship it is imperative to consider the positive actions of users as a reaction of any brand's engagement tactics.

A fundamental customer journey can be envisaged in the form of customer funnel. The touchpoints available at ev

ery step can be shown as:

Awareness Consideration Decision Purchase Post-purchase Word of mouth, social media, regular advertisements on the customer journey map Congruence with perceived and offered benefits, cost-benefit analysis, value proposition Place and time utility, loyalty towards product, switching costs Retail/on-portal conversion levers, customer schemes Dissonance, purchase complexity

To understand the reach of social media by the use of numbers

Most popular social networks worldwide as of July 2020, ranked by number of active users (in millions)

How many retweets on Twitter? How many reactions to the post on Facebook? How many likes on Instagram? How many shares on LinkedIn? This seems to be the new age Resume.

Thus, a good question or mystery for any brand is how to measure their social media engagement. As with most online actions, it's often difficult to measure offline benefits. More often than not the online campaigns do not drive any conversions on the same day/week, but a user may see those posts and become more familiar with the brand. That familiarity, later on, might result in him choosing that brand over an unknown competitor. Social media engagement as a result helps businesses in developing their brand's personality, improves visibility, and becomes its voice.

Customers exhibit dynamic behavior based on the type of product. It could range from picking and variety-seeking to high involvement processes comprising extensive information search. Top of the mind recall rules due to this purchasing behavior implies that targeted advertising and marketing is extremely important. No one engagement strategy can be applied across brands. Each brand's strategy must differ based on what the brand is trying to sell, its target customers, and the beliefs of the brand.

Some of the key aspects of marketing strategy that we have influenced as vital cogs in the digital marketing wheel are:

#### Influencer Marketing

Influencer marketing involves a brand collaborating with an online influencer to market one of its products or services. Here the audience doesn't care much about your brand but the opinions of the influencers.

An influencer as being someone who has:

The power to affect the purchasing decisions of others because of their knowledge, position, authority, or relationship with their audience.

a following in a distinct niche, with whom they regularly engage. The size of the following depends on the size of their topic of the niche.

2017 saw Chanel being named as the most influential luxury brand on social media. Since then, it has continued to grow and diversify its portfolio, while providing constant engagement to its plethora of followers, especially on Instagram.

#### Cross-Channel Marketing

Cross-channel marketing or multi-channel marketing is the practice of using multiple channels to reach an audience. Because not everyone uses every single platform, it's a good idea to have a presence on a few, and share some of the same content across the different networks. What makes a difference in this marketing strategy is the choice of platforms. Apart from using basics like Facebook, Instagram, and Twitter a clever use of Spotify, YouTube, or IGTV to showcase the brand can make a real difference.

The luxury vehicle brand, Land Rover's cross-channel marketing includes the Google Display Network, homepage masthead and Masthead in Lightbox ads on YouTube, and visibility through mobile, search, and Google+. The brand's digital campaign included four different influencers who created visual content for their blogs by taking trips to places like Glacier National Park and the Appalachian Mountains and Land Rover's microsite. Their cross-channel efforts resulted in 100 million impressions from YouTube, and a 10% increase in search ad CTR. Further results found that online leads from its digital channel efforts now account for 15% of the brand's total sales.

#### Informative

The content created on social media must add some value addition to the customers. The brand must constantly keep informing the customers about their existing products, new products, achievements of the brands, or even casual content. There should be "Wow, I didn't know this" factor. Only then will they become regular followers of the brand.

An example of this would be a cosmetic brand posting make-up tutorials. Fenty Beauty is one such prime example, which has built up to 1.4m followers within just 4 days of its launch, eventually garnering close to 10m followers, with Rihanna being one of their icons.

#### Involving customers & engaging them:

"Customer is King" is a known concept. It is the foundation of traditional marketing. So while we shift to Social platforms brands must not forget them. Understanding their needs, addressing them, inviting them to respond and take part in the brand's online activities while keeping it interesting and entertaining for the customer is the key.

Founder and CEO of Glossier, Emily Weiss, described the brand as, "the first socially-driven beauty brand." Glossier was certainly the pioneer in the term 'Instagram brands' – using the platform not only to build awareness but also to have focused conversation with the customer. Glossier often crowdsources product development, asking its Instagram followers what they'd like to see next.

#### Dynamic

The content creation must be dynamic and suitable for the current season, festival, or event that is happening. People must be able to relate to the posts and they must get excited after seeing it.

Starbucks does a marvelous job when it comes to being dynamic. Their one-off recipes and continuous hype around seasonal events and related drinks have won them a silver IPA Effectiveness award for its social strategy in 2018. The launch of its now iconic 'Unicorn Frappuccino', spurred on the trend of brands deliberately creating 'Instagrammable' food and drink. As a result, there are now 557,232 posts using the hashtag #PumpkinSpiceLatte.

#### Product focussed

Now of course the real motive behind any marketing activity is to eventually sell the product. So it becomes extremely important to not lose the essence of the product while marketing. In simple terms, the content or strategy must not leave the customer confused about what the brand actually does or what it is trying to sell.

To support the product-centric statement, Oreo is the best example. Oreo's social media strategy has never diverged from its original formula. Completely product-focused and yet always creative, the brand continuously finds ways to put its cookies center stage. The 'Daily Twist' campaign to mark its 100th birthday, saw the brand turn its Oreo cookie into something of cultural relevance for 100 days, including Elvis Presley, a baseball, and a rainbow flag in support of Pride.

#### Visuals

"A picture is worth 1,000 words". This adage has never been more apt than in the age of social media. This is why visuals are so important in any marketing strategy. You can talk about a product all day, but until you're able to put it in front of someone's eyes, it's not going to have nearly the same effect. Visual content marketing is a great way to make this happen and can be broken down into six basic types- comics, memes, infographics, photos, videos and visual note-taking.

Coca-Cola has been a leader and trendsetter in the visual content marketing space for years. The 2020 initiative paved the way for multiway communication, as opposed to the single way process that was prevalent.

#### Product demonstration:

The barrier for electronic platforms has always been the loss of touch. Customers often complain that till they

don't touch, try or test the product they are not convinced if they want to purchase it. This can also be true for products that are new and the customers need to be educated about its use. Hence it becomes important for brands to bridge this gap as far as possible through their online medium.

Product demonstrations are considered one of the most promising and upcoming applications of AR technology, giving brands a way to provide an immersive experience to consumers. Gucci partnered with Snapchat for the first global branded AR shoe try on the lens, hugely increasing fanfare!

#### Social message

Corporate Social Responsibility should not be missed when it comes to social media engagement. If a brand has the reach to spread awareness then they must use it. Creating content to spread social awareness adds an emotional touch too. If a customer connects with a brand on an emotional level its hard for competitors to break it. Dove's steady and impactful social message still stands out as marketing that's more than just marketing. The 'Real Beauty' campaign has been refreshed multiple times since it first launched in 2004. Dove's latest campaign once again highlighted the core message, going far beyond surface aesthetic to focus on the beauty of real human values. The 'Courage is Beautiful' campaign successfully honored the healthcare workers who have been working selflessly throughout the 2020 pandemic.

The fact remains that the share of mind and voice are key elements to being the dominant force in the world today. Social media marketing has leveraged all the elements and made its presence felt in every customer engagement. Finding unique ways to really stand out among the competition is key to a successful digital marketing strategy. Newer and more customized tools to feel the pulse of the market come up every single day, to meet the ever-changing needs of marketing heads. At the end of the day, 'customer is indeed king'. And companies would do well to remember it!

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By Ajay Bidyarth - November 6, 2021 4933

Petty Entrepreneurs like Streetside Food Stalls form an essential part of an economy that plays a significant role in balancing the development of a nation's economy. The importance of street food vendors not only helps in increasing the country's per capita income but also helps to make a living for the unemployed in society with a limited investment. Most of them are the sole breadwinners for their families. So, with the Covid-19 wreaking havoc, the uncertainty of the lockdown policies increased the concern of people over hygiene and the lack of investment to upgrade their businesses to provide better hygiene facilities that can take away food from their mouths.

Various states have provided relief packages and support but, in a country, as populous as ours, it has hardly been appropriately implemented. Delhi, for instance, recently announced a rupee 500 million stimulus package to nearly 500,000 rupees, recognizing the severe consequences of the loss of livelihoods. The seller's intended remedy is a credit loan that provides all sellers with an initial working capital of Rs 10,000, but this is not enough. Instead of loans, the government should consider converting them directly into income benefits, cash subsidies to secure a livelihood in order to initiate income-generating activities on a regular basis. Sellers need income support to get back to work, and if they can't, they will never be able to repay the loan amount. In an ever-changing crisis, organizations need to take a step forward and ensure that providers are provided with the resources they need to make a living. Pandemics have had a vast economic impact on every sector, but the most vulnerable sectors, such as street vendors, suffer the most. Decreased income can affect most necessities, such as payments to family and yourself. Due to a lack of fixed salaries, stalls cannot quit their jobs. If possible, it might be only a few days, unlike regular employees. For them, the risk of infection is far less frightening than hunger.

Unlike many of the businesses, most of these food vendors lack the infrastructure to go online and sell products through platforms like Swiggy or Zomato.

"Regret not going digital before," says Dilip Das, a Street side food stall owner at Sector V, Kolkata. Dilip Das used to run a small streetside food stall that provided meals to all the employees around the area which is filled with multinational companies. It was a booming business till the arrival of Covid. Then with the lockdown arriving, almost all the companies opted for Work from Home policies. Dilip tried to start deliveries, but with the lack of support and fear of infection, that business ended before it even started.

Citing similar reasons, Swapan Mondal, who runs a south Indian food stall at Park Street said that he did know how to operate a smartphone. And since sales were good, he did not care about learning either. But with the implementation of lockdown which took place within 4 hours, people like Swapan barely had time to cope with the changes.

Furthermore, the Covid 19 pandemic made people realize how important trains are in our life. With most of the train network suspended, the entire supply chain was disrupted. Hundreds of quintals of food products rotted away, awaiting the logistical issues to fix. Many businesses could not afford to run without proper supplies as well.

To handle such issues, vendors organizations may consider the following solutions:

Promotion of livelihood for all vendors, including sellers of non-essential goods

The impact of COVID19 was extremely severe for informal workers who ran out of capital and income and to try to feed themselves during this long embargo. Sellers need to be able to resume sales in order to survive, and governments need to take steps to reopen the market and bring sellers back to the business.

Reopening of Markets keeping in mind social distancing and hygiene

India has different types of traditionally crowded markets, even weekly markets (fresh food, cooked food, and essentials) and daily roadside markets. These markets have to reopen with the need for social distance in mind, and the government needs to publish guidelines for that. In the future, sales areas will also need to be designed with social distance and the need for adequate sanitation (running water, wash areas, toilets) in mind. Authorities need to work with the Town Bending Commission (TVC).

Provision of direct support that is devoid of existing registration requirements

Once the restrictions are lifted and the impact of Covid 19 is somewhat manageable, sellers who have been at home for months will need direct income benefits to help them to return to work. The government initiative is a welcome move, but not in terms of the type of bailout and eligibility is enough. In addition, there are very few registered providers in India, so government relief and support must be separated from the very strict registration requirements. In Delhi alone, of the approximately 300,000 street vendors, only approximately 13100 have some sort of professional ID. If all types of cash grants or livelihood support standards relate to job identification by the state, the government must also accept registration with workers' organizations/unions on behalf of government-issued sales badges.

Ensuring social distancing and proper sanitation and hygiene at sites of businesses

The government and municipal corporations need to take the initiative and running water, and soap/sanitizers need to be provided for street vendors at their place of work. Moreover, the streetside food vendors should work with food safety authorities in the country to train themselves in different ways to maintain hygiene whilst working.

Taking steps to spread awareness of different government initiatives and reliefs

Many small businessmen and food vendors do not even know their rights and the benefits they can claim. If they did, many still have no idea about how to claim them. Proper awareness camps need to be set up to help these small-time food vendors to know how they can get assistance and help from the government and return back to the business.

When Covid was an unknown word, these shopkeepers and vendors brought the taste to our mouth, gave us memories to live for, filled our bellies, and quenched our thirst when we needed them. It's time to provide them with a hand now when they need it.

Blackcoffer Insights 34: Sarthak Satyabrata Mishra and Abhijit Kundu, Symbiosis Institute of Management Studies, Pune

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By Ajay Bidyarthi - May 1, 2020 6500

The coronavirus, also known as COVID-19, is not only a global public health emergency but also a source of significant regional and increasingly global economic disruption. This impacts the energy and climate world in many ways. The economic downturn puts pressure on global oil prices leading the Organization of Petroleum Exporting Countries (OPEC) to consider further cuts to production. It hurts the demand for natural gas during a time of extremely low prices. It changes the economic, energy, and climate policymaking environment in China, one of the most consequential energy consumers and sources of greenhouse gas emissions. And it has temporarily disrupted supply chains throughout the energy industry, including renewable energy, at a time when supply chain connections with China were being reevaluated due to ongoing tariff and trade disputes. How consequential or transformative any of these changes are for the energy sector or for climate efforts will depend upon the ultimate trajectory of the virus outbreak itself.

— Sarah Ladislaw, Senior Vice President and Director, Energy Security and Climate Change Program  
The energy sector has already felt the impacts of the coronavirus. The outbreak has contributed to a dampened demand for oil, resulting in plummeting oil prices and production declines. As we move forward, then, the energy sector expects to face two headwinds: managing the issues of the health emergency all sectors face, and simultaneously coping with a low oil-price scenario, lower demand and the need to shore up revenue and manage debt obligations.

#### IMPACT OF COVID-19 ON INDIAN ENERGY MARKETS

In India, distribution utilities have a lower tariff for domestic and agricultural consumers, sometimes even below the average cost of supply, as compared to that for commercial and industrial consumers. Table 1 provides the electricity tariff rates in Delhi for selected consumer categories to highlight these differences. Thus, for several distribution companies, the lower tariff-paying consumers are cross-subsidized by commercial and industrial consumers.

Category Fixed Charge (₹ /KVA/Month) Energy Charge (₹ /KWh) Industrial 2507.75 Single point delivery supply for Group Housing Societies 1504.50 Agriculture 1251.50 Table: Electricity Tariff Schedule for FY(2019-20) – Delhi Electricity Regulatory Commission (DERC)

The COVID-19 lockdown has led to shut down of all but essential commercial activities across the country. Approximately 1.3 billion citizens are obliged to remain within the confines of their homes and, in many cases, only allowed to work from home. Consequently, the electricity demand from industrial and, commercial customers has reduced significantly while the residential demand is expected to have increased. According to the Power System Operation Corporation of India (POSOCO), The energy met on March 16th, 2020 – which can be considered as a business-as-usual scenario – was 3494 MU as compared to 3113 MU on March 23rd, 2020 a day of voluntary curfew. It further reduced to a range between 2600-2800 MU between March 25th to March 31st, 2020. This trend is illustrated in the below Figure 1.

Figure1: Daily energy met (MU)

Thus, firstly, a key risk from the COVID-19 pandemic for the already struggling distribution companies in India arises from the loss of revenues due to the reduction of demand from the commercial and industrial customers as well as the inability to cover the cross-subsidies provided to the lower-tariff paying consumer. Secondly, the

utilities would also have to account for the expense to comply with any ‘must buy’ commitments that they have with generators with long-term power purchase agreements. The true and full extent of this risk would only be known once a quantitative analysis is conducted when this crisis situation is contained. Thirdly, at an operational level, distribution companies would have to account for deviation in demand and supply patterns at a temporal and locational level. Finally, during this period, critical infrastructure such as electricity networks would have to be run with minimum employees.

#### COVID-19 impact on the power market

As seen in Figure 1, the trade on the wholesale power market comprises just 4.3 percent of the total electricity transactions. However, the transactions through the power exchanges have grown over the last decade. The Indian Energy Exchange (IEX) has seen a growth from 2616 MU in FY 2009 to 52,241 in FY 2019.

Figure2: Share of market segments in total electricity generation 2018-19 (Source: CERC)

Until now, the trade in the wholesale market is in four market segments:

- 1) Day-Ahead Market
- 2) Term Ahead Market
- 3) Renewable Energy Certificates
- 4) Energy-saving certificates.

Recently, the Central Electricity Regulatory Commission (CERC) finalized the regulations for implementing real-time markets. This half-hourly market will enable the intra-day trade of electricity, allowing adjustment of generation and consumption profile during the day. Before the COVID-19 pandemic, it was announced by CERC that the real-time market would be operational from April 1st, 2020. However, the starting date has now been delayed by two months to June 1st, 2020. According to media reports, due to the COVID-19 pandemic, some required trials could not be completed. This delay in the real-time market implementation is likely to have a serious, adverse impact on the Indian power market.

Another impact of the COVID-19 pandemic on the power markets is in terms of the market dynamic. It can be observed that there is a dip in the clearing volume and the market-clearing price, which coincides with the gradually increasing shutdown measures taken by the government as a response to COVID-19 (See Figure 2). Thus, the reduction in demand due to the lockdown is reflected in the volumes traded on the electricity market and the clearing price.

Another point of reference is the price and clearing volume in 2019. On March 22nd, 2020, the day of voluntary lockdown, the clearing volume was 97.05 GWh, and the clearing price was 2195.48 ₹ /MWh. In comparison, on the same day in 2019, the clearing volume was 107.98 GWh, and the clearing price was 2816.18 ₹ /MWh. From the start of the lockdown, from March 25nd to April 1st 2020, the average clearing volume was 104.27 GWh compared to 130.24 GWh in 2019 during the same period. Similarly, the average market clearing price was 2155.93 ₹ /MWh in 2020 as compared to 3371.025 ₹ /MWh in 2019 for the same period.

#### VIEWS OF THE SHAREHOLDERS IN INDIA

The lockdown has resulted in a shutdown of the industrial and commercial establishments and the stoppage of passenger railway services. This has adversely impacted the all India electricity demand, given that these segments constitute about 40% of the all India electricity demand, a statement issued by the rating firm said.

Further, these segments account for an even greater percentage of the Discoms sales revenues given that they are the subsidizing segments. This apart, with the focus of state governments being on healthcare and relief measures, the likelihood of subsidy support to the Discoms getting deferred cannot be ruled out, it added.

ICRA Ratings Group Head and Senior Vice President – Corporate ratings Sabyasachi Majumdar said, “The lockdown imposed by the government is likely to adversely impact the all India electricity demand, with demand expected to decline by about 20-25% on a year-on-year basis during the period of lockdown. This would in turn adversely impact the revenues and cash collections for distribution utilities in the near term, especially given the consumption decline from the high tariff paying industrial and commercial consumers and likely delays in cash collections from other consumer segments. The revenue deficit for the Discoms is estimated to be about Rs. 130 billion per month, on an all India basis. This would in turn adversely impact the liquidity profile of the Discoms, increase their subsidy requirement, and lead to delays in payments to the power generation and transmission companies.” The power ministry on Friday issued directives to the Central Electricity Regulatory Commission to provide a moratorium of three months to Discoms on payments to power generation and transmission companies.

The power ministry on Friday issued directives to the Central Electricity Regulatory Commission to provide a moratorium of three months to Discoms on payments to power generation and transmission companies and requested state governments to issue similar directions to state electricity regulators.

The power generation companies are already suffering delays in payments by Discoms across the majority of states, with payment due of more than Rs 85000 crore as of November 2019 at all India level as per the data on PRAAP TI portal.

With COVID-19 lockdown accentuating the delays in payments, the availability of adequate liquidity buffer in the form of debt service reserve and undrawn working capital limits remains important from a credit perspective. However, it is said that relief measures such as a moratorium on debt servicing over a 3-month period as notified by Reserve Bank of India and expected moderation in the interest rate cycle would be a source of comfort in the near term. The timely approval of the moratorium by the boards of the banks and financial institutions remains crucial.

The revenues for power generation companies having long-term power purchase agreements (PPAs) with the state distribution utilities (Discoms) will be protected by the provision for capacity charges linked to plant availability in case of thermal and large hydropower projects and “must-run” status in case of nuclear and renewable power projects. Average monthly thermal PLF would further dip to 50-52% against 63% in the corresponding period of the previous year, due to a considerable drop in demand and consequently, power generation companies especially those without any long-term PPAs would be adversely impacted given the weakening of the power tariffs in the short-term / power exchange market, said ICRA Ratings Sector Head & Vice President GirishkumarKadam. The under-construction renewable power projects as well as EPC and manufacturing companies in the solar segment are likely to face execution delays because of disruption in the supply chain in India and labor availability, following the lockdown. Given the import dependency on China for sourcing PV modules, the execution timelines for the ongoing solar projects are likely to be affected by delays in the delivery of PV modules following the outbreak of COVID 19 in China.

This delay in turn would increase the pre-operative expenses and the overall project cost, which in turn would have an impact on the expected returns.

In this context, the MNRE has notified that time extension can be provided for all renewable energy projects, which are impacted by the supply chain disruption due to the COVID outbreak, under the force majeure clause.

“Given the execution headwinds amid COVID 19 affecting Q1 of FY2020-21 and assuming the normalcy thereafter, the capacity addition in the wind and solar segments together is likely to degrow by about 25%, thus estimated at about 8 GW against earlier estimates of 11 GW in FY2020-21,” said Kadam.

Figure: Cleared Volume (above) and Market Clearing price (below) for IEX between March 17th – April 1st, 2020.

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By Ajay Bidyarthi - May 1, 2020 6374

In December 2019, a novel coronavirus strain (SARS-CoV-2) emerged in the city of Wuhan, China. The disease called Covid-19 spread to almost every nation in the world creating widespread havoc and disruption in routine life. WHO recognized it as a pandemic on March 10, 2020. As of April 19, 2020, worldwide around 24 lakh people have been infected and more than 1.6 lakh people have succumbed to Covid-19.

Though a vaccine hasn't been developed yet, the spread of coronavirus can be stopped by washing hands frequently, covering one's mouth while coughing, and practicing social distancing from other people. Countries across the world are using lockdowns as an effective way to stop the spread.

29 kb of RNA has brought the world down to its knees. One-third of the global population has been in lockdown. Schools, colleges, businesses, services that are considered non-essential have been put on hold for an indefinite period. Even after lifting restrictions, a global recession even worse than the one in 2008 is going to be expected.

Now arriving at the main field of discussion, i.e. Hospitality Industry. How COVID-19 Impact Hospitality? Propulsion was building for 2020 to be a year of focal collective action on sustainability. The Covid-19 outbreak has emphasized more than ever, the importance of future-proofing business for growth and resilience. The hospitality industry includes various services like lodging, food and beverage, events, tourism, transportation, theme parks, etc. Before COVID – 19 prevailed, we all know that this industry was in much demand and was also one of the major sources of the rising economy. During vacation and festive periods, these were always full of people worldwide. As of now, due to the havoc created and ongoing lockdown they are bearing many losses and is one of the main reason for the decreasing economy.

Have you ever thought of hotels been converted into hospitals, quarantine centers, and isolation centers? Yes, my dear people! Amidst this outbreak, many of the hospitality industry properties, be it tiny or enormous have come forward to help the nation fight this life-menacing virus.

Taj hotel in Mumbai is attentively aware of its responsibility towards the community and has opened its doors f

or the major frontline workers, i.e. medical fraternities to stay at their place while they combat the spread of this treacherous virus.

Also, many of the government bodies have been transformed to provide shelter to the homeless. Recently, in Vadodara - Gujarat the building which was built for the employees aiming to work for the major Mumbai-Ahmedabad bullet train project has been come forward to make it an isolation center for doctors and nurses.

"Railways - the lifeline of citizens." As railways have started their service years ago, from that period they are being considered as the lifeline of citizens in many metropolitan cities. Today at the time of the global pandemic, railways haven't backed off from the position of the lifeline. Yes, my dear friends, you have heard it right! Railway coaches in India have been turning into the hospital and isolation centers, marking their presence by helping the government to increase the number of isolation beds. Also, many special parcel express trains are running in the entire nation to fulfill the needs of people by transporting essential commodities and goods.

Hospitality has been one of the most innovative industries in the crisis so far. Connections have been rapidly formed to donate food and beverages to local charities from various hotels. Many of the hospitality bodies are standing in solidarity with the communities affected by this threatening disease by lighting their windows in the shape of a heart, seen in hotels across the world.

With this outbreak, there is a sharp drop in tourists worldwide as the aviation, railways and public transport buses have come to a standstill due to severe government restrictions.

Today it is clear that hospitality industries must be prepared for various situations like a pandemic, climate change, etc. as of now they are facing devastating and disastrous Covid-19 impact on its various sectors.

The debt being the normal capital intensive component has to be serviced by payment of interest on debt and repayment of debt. Hotels being labor-intensive, have lots of fixed costs such as wage bills, besides paying government levies, minimum load charges, etc. The earlier Indian hospitality industry was on average witnessing 65 to 70% of occupancy till the end of February. The first few days of March were fine, once things started accelerating, the occupancy has gone down to a severe minimum. Also as soon as the pandemic ends by God's grace, the hospitality industry will still face some loss as the tourists will be much lesser in the beginning months.

As soon as the crisis gets over, the hospitality industry will have a very crucial role to play in rehabilitating lives within their local communities. Millions of people will be unemployed leaving them at high risk of poverty and exploitation. As the industry starts to recover, hospitality will be one of the sources to increase employment to the needy ones taking the poverty level to a minimum.

Within India, after the crisis over, people should travel to the less known and highly economically affected destinations to help the hospitality industry overcome the loss they bore due to Covid-19.

Hence, the hospitality industry suffered and is suffering a lot due to this pandemic and despite that, it is also helping the nation to win against this dangerous disease. thus COVID-19 Impact on Hospitality

"Let's be grateful to all the frontline workers saving the entire nation and also be thankful to all the various sectors of the hospitality industry who have come forward to help and serve the nation."

Soon we will fight this!

Stay Home! Stay Safe!

Jay Hind!

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By Ajay Bidyarth - May 1, 2020 6381

As a race, we are not ready for any kind of crisis. We have fire extinguishers in buildings, but barely any knowledge of how to use it. We convince ourselves that we are prepared but in the face of adversity we stand dumbfounded and give the simplest excuse, that of being in 'unprecedented times'. The same thing has happened with the coronavirus crisis. If we look back, we can see that this crisis was not avoidable. There was a lot we could have done, but because we underestimated it so much, the situation has now blown out of proportion and cost us thousands of lives, millions of jobs and a massive hit to the world economy. We may be in a unique condition but there is still a lot that we can apply from past experiences and previous calamities.

First, let's look at this in a reflective mode. What are the things we could have done to avoid this crisis in the first place? Controlling the origin of a virus is difficult but preventing it from spreading is not. One of the biggest contributors to this unforgiving crisis is the lack of communication or even worse, the propagation of fake news. Take India for example. Clear communication about the virus was only initiated after a few cases had been identified. We were aware of the hazards of this virus since before and should have acted sooner. The spread of accurate and timely information is a must. If we had spread awareness earlier, we could have controlled the number of cases better, like New Zealand and Ireland have done. Secondly, in a situation of crisis, the first thing to spread is fake news. It is imperative that the government, social media agencies and people themselves act more responsibly. Since there is no accurate and transparent information, a lot of uncertainty exists in the society. This impacts the confidence of consumers and investors in the market, which in turn leads to an economic slowdown. Past experiences with financial breakdowns and recessions have shown us that retain market trust can only occur with transparency and accuracy of information. Organisations should have acted earlier and communicated more effectively with their employees.

Moreover, we must also understand that specific sectors take the hardest hit during lockdowns. As we have witnessed in earlier lockdowns, curfews, national emergencies and pandemics, the first segment of society to take a hit is the daily wagers and labourers. Not only do the prices of goods increase but their income also takes a decline in such a crisis. In such situations, they can't even afford basic amenities. India witnessed a mass exodus recently, with thousands of people trying to return to their villages on foot. This only leads to more chaos and a decline in containment of the disease. The government should have accounted for such factors before announcing a lockdown with a four hour notice. They could have made better arrangements for food and water in the metro cities itself or giving them safer means to travel home. This is something that they can still include in their relief programs.

Government intervention is a must right now. This can be done in two ways. First, is to create more employment opportunities. Governments used this strategy in the SARS and Ebola Virus emergency. Health, water, sanitation and hygiene are the most services in the times of health emergencies. Intense investment for these services and infrastructure can provide immediate jobs. Secondly, if governments use fiscal and monetary policy to fuel demand and maintain current living standards, it can decrease the propensity of a huge fall in economic growth. A fiscal stimulus by the government can make all the difference. Having better avenues for cash transfers, easier loans and more exchange will automatically help. A fall in the growth rate is unavoidable as lots of sectors have no choice but to pause all work. However, industries that can provide high returns even now must be encouraged. For example, IT sector, health, food and agriculture, etc.

Moreover, governments and businesses should use the most important tool in their hand, the internet! Even in the times of physical social distancing, we are still connected to people across the world and are socialising at our normal rates. Governments should use these mediums to maintain public spirit, communicate policy strategies and inform people. Businesses should use these means to continue working and maintain employee morale. To have balanced crisis management and to prevent panic in the masses, social dialogue and engagement at every level is imperative. Use these mediums to educate people about the importance of social distancing, hygiene and steps to be followed.

All diseases are different and the scientific approach to tackle them varies. However, with most epidemics and pandemics some common steps can be followed. Our past experience with fast spreading diseases has shown that the easiest and most effective way to curb it is social distancing. Countries have taken impressive steps to ensure social distancing and must keep this up for even a few weeks after curbing the disease. Maintaining sanitary habits and hygiene can protect us from infections and increase our immunity. While governments and medical agencies look for ways to tackle the virus at a macro level, we must continue to follow all measures on an individual level too.

We must also pay a lot of attention to mental and physical well-being now. In the past, when economies took a hit due to the 2008 recession or calamities, the first thing to break was people's self-esteem. Suicide rates, a mount of domestic abuse and cases of depression increased manifold. We have to take effort and ensure that we try and live as much of a balanced life as possible. We should stay connected to our friends and not be ashamed of reaching out to others for help. Social distancing is not easy and can take a toll on many. Lots of special helplines have been set up for the same and people must use them if needed. Governments have also given code wo

rds for victims of domestic abuse to report crimes in countries like France and Spain. We must remember to stay mentally healthy and calm during a crisis as that is the most important thing.  
I don't believe that every crisis is the same. Of course, there are a lot of unique things about the coronavirus pandemic that we had not expected to ever see. Even though these are different times, there are still lots of things we can apply from our past experiences. We cannot find a cure for the virus but we can find ways to maintain the economy, our mental peace, and prevent the spread of the virus. The past has a lot to offer if we ponder. We must learn to understand the mistakes of the past and better them in the future. Our past experiences with the different crises have taught us that fiscal stimuli work, maintaining employee morale is important and that social. Engagement is imperative. If we use these tools efficiently, we can ensure that people only have to fight the virus and not worry about the multitude of repercussions that come with it.

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By Ajay Bidyarthi - May 1, 2020 6407

COVID-19 an unprecedented pandemic for us but a “Can-be” possibility for great leaders such as Bill Gates came into action since the rising of the year 2020. The corollary of this pandemic is so prodigious that the analysis by the UN Department of Economic and Social Affairs (DESA) stated that the COVID-19 pandemic is disrupting global supply chains and international trade which in turn could shrink the global economy by up to 1 percent in 2020, a reversal from the previous forecast of 2.5 percent growth. More than 6.6 million Americans filed unemployment claims and the economic downturn is expected to be the worst recession since the Great Depression as stated by the IMF. India is facing its biggest crisis in decades, with a three-week lockdown initially, but extending further in a nation of 1.3 billion people likely to result in an economic recession, millions of job losses and possible starvation among the poor. It can be said that economic contagion is now spreading as fast as the disease itself. On the contrary nature has pressed the reset button, the environment is having a noticeable ben-

efit from this scenario. Water is getting clearer, the air is turning breathable and various such news and pictures can be easily heard and seen on newspapers, telly, and social media platforms on day to day basis. But this is the storyline of the present, what about the future? Are the predictions made by financial institutions and thought leaders going to be true? Or something unexpected is going to happen that will make us think of our human capabilities again?

After this storm of COVID-19, it would not be a surprise to see how digitally every business will grow to provide better digital infrastructure and customer experience along with advancement in technology which we are lacking in this present scenario. The touch screens that we are using already will find its vast applications and would be seen in most of the places including hotels, hostels, and shopping malls. All those processes which are interdependent will take an agile turn resulting in better productivity of goods, having a systematic backup giving a better experience to the consumer even in hard situations. The major focus would be making contactless systems hence Artificial intelligence and machine learning will become the most rapid and in-demand fields. Not only this, but the medical infrastructure and services will also take a boost in the race of developing the systems to handle any situation afterward. The human to machine interaction will increase facilitating fast production, delivery and surveillance inculcating many more. In each and every area the COVID will leave its mark may it be retail sector or may it be the banking sector making them modify or fully change their architectures. Even the existing systems would be gifted with some modifications, ensuring them to work in a hard environment even with or without human intervention. The Companies will rethink their policies shaping themselves accordingly to manage the resources ensuring safety, agility, and work to be a top priority. The work from home idea will also provide a base for bigger companies ensuring to develop a better infrastructure for their resources and probably giving birth to a new concept of work culture. Various existing industries related to either delivery or travel may adopt the new idea of collaboration with other industries which will result in more options for consumers on their old routine Apps.

New businesses will root out from the existing ventures resulting in head to head competition in the business world but turning into a brownie point for consumer experience and bandwidth of choices. Start-up culture will go hand in hand and expected to take a stupendous growth in the race of providing us a legitimate opportunity to use and feel the real digital world. The various innovations will now take a pace in each field and maybe we will hear some new jargons related to tech in upcoming years. Since the global economy has fumbled, countries will now try to take a different turn to vamoose out of this phase. They will try to make new connections by nurturing a give and take relationship and several business relationships would take an unexpected move making the position of several countries sliding up and down on indexes. Even rival countries may join their hands in this hard time rather than being dismissed totally under predator countries. It would be surprising to see how these scenarios will be handled by the emperor of minds and how their opponents are going to take it as an agenda for the next elections.

Unfortunately, the nature that is at its best will start to face the ill effects after the chart of development and economy will take a pace for exponential growth. It is unfortunate that the inverse relationship between economic growth and environmental destruction exists since carbon emission increases with economic development. As shown by the graph below whenever recession took place the carbon emission decreases along with other harmful gases, turning out as a gift for nature but doom for the financial markets.

But there is a possibility that several start-ups now emerge with the idea of environment conservation collaborating with NGOs innovating and using the best of their capability to reduce the ill effect from the present origin point.

In the culmination we can say this pandemic is like "Blessing in disguise" producing a massive impact not only on macro but also on micro-economy. The novel virus not only brought some unexpected results but also uncovered some of our loopholes and unlatched new opportunities for growth, forcing us to define ourselves in several new spheres. Quite a while ago we all were chit-chatting about the digital Era, how this is benefiting us, COVID-19 revealed making us realize this was just the beginning of digital Era and a lot is needed to happen in future. It is obvious that not only the Indian economy but the global economy is facing and going to face the aftereffects however similar to a virus, the economy will also rise from deep grounds to a green candlestick with individual collaboration!

The businesses will soon rise again, people will get back to their jobs, vendors will start getting profits and everything will fall into its places but now a megalithic competitive environment will rise which will grow till decades until nature again shows its color and we as a human abide with its outcomes, learning some new lessons and keeping this cycle of fall and growth running.

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Will COVID19 END Globalization?

Globalization:

Globalization envisages a borderless world or seeks the world as a global village • It is attributed to the accelerated flow of goods, people, capital, information, and energy across borders, often enabled by technological developments.

Globalization Trends:

Starting from 1990s globalization dominated world's economic order.

Anti-Globalization Wave:

Globalization had already begun to stagnate since the 2008-09 Global Financial Crisis.

Slowing Down of Trade:

Trade as a percentage of global GDP increased from 39% in 1991 to 61% in 2008 but has stagnated over the past decade.

Countries Policies Reflecting the Reverse Globalization:

The following policies and steps of various countries show the protactinium

1. USA

We reject Globalism, President Trump took 'American First' to the United States – Trump

2. Brexit

Brexit is a rejection of globalization-Larry Elliott

Slowing Movement of People:

Though number of tourists increased in the last decade.

1. Indian IT's H-1B Visa woes could worsen in 2020

The above article reveals that Under the Trump administration, Indian IT services companies have seen rejection rates jump from 6% in 2015 to 24% in 2019.

2. Racism study finds one in three school students are victims of discrimination

Trade Wars and Halting of WTO Talks: Retreat of Globalization:

1. Chinese-US trade war threatens globalization

2. Protectionists put brakes on trade liberalization

Due to These Factors, International Media Is Referring to The Process of Globalization By The Term 'SLOWBALISATION'

The ongoing phase of globalization has not fully recovered, and the recent coronavirus has pushed forward the trends of reverse globalization

Globalization Is Responsible for The Spread Of Coronavirus:

The virus started in Wuhan, China/China, being a hub of many industries. People from all over the world are travelling in and out of China/Italy itself a tourist and business hub, the man in Delhi who tested positive for coronavirus had travelled to Italy/Other countries get the virus because of the movement of people and goods

Corona Virus Has Halted The Movement Of People, Goods, Service, And Capital.

More than a fifth of the world's population has been under lockdown in the global fight against coronavirus with early sign of success.

Due to Supply Chain Break Down In China because of Coronavirus

Countries Providing Incentives To Shift Production To Their Native Country

Amid Covid-19 World Trade Has Halted, Investors Are Pulling Out Money from The Market

## Other Side Of The Coin!!

Corona Virus Won't End Globalization, But Change It Hugely for The A Better

Will Hutton

An unregulated world can be blamed for its spread, but collective action based on evidence could be the best way to stop it.

### Trade During Coronavirus:

1. India Readies list of 13 countries to send hydroxychloroquine.

2. China Sends doctors and masks overseas domestic coronavirus infection drop.

### Movement of Ideas

Countries are converging virtually to share best practice to fight pandemic

International meeting such as G-20, SAARC summit organized virtually

Living apart, we must stand together' to battle coronavirus pandemic-UN Rights chief.

China's BRI Project after COVID-19

### BRI Project:

The Belt and Road Initiative is a global development strategy adopted by the Chinese government in 2013 involving infrastructure development and investments in nearly 70 countries and international organizations in Asia, Europe, and Africa.

### Curtailed Connectivity after Covid19:

A devastating economic collapse of potentially historic proportions after Covid19, leading to social and political turmoil in a number of countries, and curtailed connectivity. Interestingly, the pandemic has exposed the risks and weaknesses of global interconnectedness, which will affect China's BRI.

### Funding Shortfall for BRI

So far, BRI has been powered primarily by China, whose growth rates were decreasing even before the outbreak. Exports Hit: With the United States and Europe reeling from the pandemic, Chinese exports will take a big hit.

China confronts major Risk of debt on belt and road due to pandemic

China's growth hit a near 30-year low of 6.1%

Roughly 5 Million people in china lost their jobs in the first 2 months of 2020.

Last February, China's official urban unemployment jumped to an unprecedented 6.2 percent. Unemployed Number may go up to 9 million by the end of 2020.

China will have to choose out of two competing priorities:

avoiding the middle-income trap, while at the same time posturing as a superpower abroad.

So, not only may BRI be short of cash, but it will also be hard to sell at home

### All Economies along BRI routes affected

Pakistan, host to the biggest BRI megaproject in the world, is poised to sustain a \$8.2 billion loss, according to ADB. The respective figure for Bangladesh is \$3 billion. Thailand is now bracing up for a recession. Africa is equally vulnerable, as China is the continent's largest market.

Covid19 hit Chinese companies executing BRI contracts can rely on support from the CDB in the form of low-cost financing. Yet, Chinese policy banks will be increasingly picky and inclined to stay away from new projects that may turn out to be loss-makers.

China Development Bank to support Belt and road companies hit by coronavirus -Xinhua

The Coronavirus and Xi Jinping's Worldview

### Priority list:

No. 1 preserving the CCP's power

No. 2 maintaining national unity

No. 3 the expansion of the economy No. 4 environmental sustainability

No. 5 modernize the Chinese military

No. 6 China's 14 neighboring states

No. 7 weaken America's longstanding security alliances No. 8 terrestrial Silk Road Economic Belt No. 9 Maritime Silk Road

No 10 reshape the global order

Under extreme circumstances, Beijing will not consider the BRI as important.

Is the BRI Finished then? Short Term: Yes, BRI will Face Trouble

In particular, the summer of 2020 may be a period of hibernation for several BRI projects.

The outbreak has brought Chinese labor supplies and equipment imports along BRI routes down to a trickle

Not Exactly!!! In fact, the initiative's fuzzy content is being further enriched with the "Health Silk Road" add-on narrative and "mask diplomacy" in a major soft-power push.

Long Term: A Changed BRI will Emerge

The BRI is bound to change. Strategies will change.

It might even be Defined Properly

Seven years after this ambitious initiative was announced it remains a blurred vision in need of a comprehensive conceptual framework, international standards, and a coherent implementation strategy.

This is one of the reasons why the BRI has become controversial and has caused a backlash in many countries.

### A Shift away from Roads and Bridges

BRI expenditure up to 2019 stood at \$545 billion. (WB Estimate) About two-thirds of spending on BRI projects has gone into the energy sector and transport

However, developing countries in need of infrastructure will be terribly cash-strapped, there may be a shift away from roads, bridges, and coal-fired power plants funded through Chinese loans.

New BRI projects will probably be more strategically chosen.

Beijing has been investing in the creation of a globe-spanning network of economic corridors, logistics zones, and financial centers, with stress laid on seaports and adjacent areas. Egypt's Suez Canal Economic Zone and Sri Lanka's Colombo Port City clearly show this trend.

In addition, projects are likely to focus on more sophisticated forms of connectivity, such as 5G networks or, in the wake of the pandemic, disaster management, public health-related high-tech, and even remote surgery. China will surely use the BRI for the projection of its soft power, an increasingly important battlefield in international relations.

The world has become aware of the risks of overwhelming reliance on China.

Amid of Coronavirus outbreak we can see the major economies are strengthening their authorities with their major concern

The USA is conducting space mining China's maritime Aggression India USA \$155 Million Defense Deal, US Approves sale of Anti-Ship Missiles and torpedoes to India.

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The UN projects a 20-30% decline in international tourist arrivals in 2020. This could put up to 50 million jobs at risk, with Asia likely to be the most affected continent. But will the good old days of tourism and travel return next year?

What is changing?

Read on to discover what our robot, Athena, has found on the future of this topic and act accordingly for you, your family and organization in the years ahead. Make notes on issues that could affect you and them as you go. If you are new to foresight, we recommend you view this slide presentation first to get the best out of this report.

Speed read Athena's high-level take-outs on the left of each slide, or delve deeper into her findings on the right.

Analysis

For a more detailed explanation of the graphics used in this presentation please click here. All outlooks based on the time period 2020-2070 and what's likely to be happening in 2025 at a 95% confidence level unless otherwise stated. Please contact us for longer-term outlooks.

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Perhaps the virtual illusion has become today's "New Reality".

Inquisitive about the conclusion? Let's attempt to vindicate as the outline story unfolds itself. Ever since the concept of gaming floated back in the 1970s a new dimension was put before human beings, intangible in nature, and paradoxically engulfed us since then. It laid an impact on multiple generations in different ways. The last decade witnessed a boom in this industry & with the advancement of technologies in Virtual and Augmented reality, the gaming world has become an integral part of our day to day experiences. With the intent of being regarded as a leisure activity, it has now percolated over various strata and has managed to gather the attention of teenagers and adolescents on a comprehensive scale.

As we explored the fabric of our Engineering batch mates, we came across this peculiar guy holding excellent academics with accolades of his names, seemed to be a nerd at a glance and street smart by nature. Concomitance happened to be the reason for experiencing the lifestyle of other personalities that included SAM as well. SAM was not only fascinated by the games but used to spend tirelessly hours and hours in front of the white screen engrossed completely leaving the track of time. As our academics advanced, the intensity of involvement in gaming grew deeper and steadily it turned into addiction in no time. We realized the gravity as we were exposed to his change of behavior and shift of priorities due to his unprecedented absence during our lectures and practical. He was modestly reluctant to share about his whereabouts with his peers. The situation turned grim when he wasn't able to cope up with the subjects and was socially disturbed while interacting. He was compelled towards the fantasy world and was trapped in the vicious cycle of a never-ending backlog of games. As time progressed his performance turned from bad to worse. He was struggling. It was clear as ice that he had something hidde

n behind that visage.

As sophomores, we were also involved in gaming but soon realized that it does more harm than good. A close cluster of friends decided to lend a helping hand to SAM and as they learned about him, the ground beneath their feet slipped away and froze their brain. He had completely lost the circadian rhythm of his sleep, ran into financial losses, aggression draped him, his relations were tarnished due to the habitual routine, and signs of depression were visible on the upfront.

Poker was the tartar that he had caught. The game of cards as most of us would perceive it, rather proved to be the fulcrum of SAM's near future. In the quest of pleasure through online games, he entered the tunnel of gambling at a very tender age ignoring the risks involved in terms of financial verticals. He was suffering from Internet Gaming Disorder (IGD) & his condition deteriorated as days passed by. Apparently, from a healthy individual to a drained skinny one, it took a toll on his physical health. Mental disturbance sucked him and he grew insensitive towards his academics. The psychological negative consequences were due to the combination of online gaming and gambling platforms. During that phase, the peer group (gaming group) gained more influence than parental control.

Days arrived when he ran short of money and went ahead to ask his friends in college for the funds. Since a large amount of money is involved in gambling, a situation exacerbated when SAM had his ethical values on the line and breached his boundaries to satisfy his hunger of gaming and leaped towards illegal means to fund his gambling.

The practical project was a crucial part of our Engineering curriculum, under which a team of four members was to be established and is expected to remain intact for a year. SAM was by no means in anyone's good books. No one in the batch was ready to risk with SAM even though he possessed a brilliant acumen. He was abandoned. We were three friends already and were scouting for the fourth. With mutual consensus, we decided to go ahead with SAM. Initially, we worked together and collaboration seemed to be perfect. Unfortunately, he wasn't able to clear his backlog exams and had to drop out. At present he plays Poker on a professional level, keeping aside his Engineering career and battling with his conscience that we may not be aware of.

Earlier generations used to spend their time or rather invest their time into activities building up their passion, in some cases they pushed their cognition to such an extreme and contributed to a level that humanity as a whole is in-depth to date. Can we imagine our present without the existence of Sir Edison, Sir Newton, Sir Tesla, Sir Einstein, and many more that were engrossed in their domain and served the necessary impetus for our generation? No one knows that SAM could have been our generation scientist, hadn't he chose that path.

Not Everyone is SAM but perhaps we could miss our Einstein or Tesla! Maybe our Newton is waiting for the new upgraded version of the game instead of sitting under the tree. Our Mendeleev might be involved in arcade games! Feels so numb.

Millions of teenagers are involved in online gaming platforms and the community is growing at a rapid rate every year. Presently the prevalence of IGD among the adolescent group was between 1.3% to 19.9% and males reported more prevalence than females. In the fiscal year 2019, there were 300 million online gamers in India. This number was estimated to go up to 440 million gamers by the fiscal year 2022. Overall, India ranked the highest in terms of the growth in online game downloads on app stores with a growth rate of 165 percent between 2016 to 2018. 75% of young people use a mobile phone to play different games, 21% use PC/Laptop. Games like PUBG that promote virtual violence calls for the stern attention of the responsible demographics. As per a study, online games are directly affecting the neurons, leading to chemical imbalance thus causing severe depression and anxiety attacks.

As per the World Health Organization, depression is interrelated to physical and mental health and the word 'depression' that didn't exist decades back has become prevalent among the youth, leading to more stress and dysfunction and worsening the affected person's life situation.

Anything in excess is poison. So are games.

In deed the virtual illusion has become today's "New Reality".

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### What is COVID 19 pandemic?

On 31st December 2019, a novel coronavirus was identified in Wuhan, China. It spread like wildfire in the world. On 11th March 2020, WHO declared COVID 19 as a pandemic and issued guidelines like Sanitizing hands regularly, wearing masks, and social distancing as viable methods for prevention against this virus.

### What is social distancing and how is it helpful?

Social distancing means staying away from other people. So, to limit human interaction various governments all over the world chose life before the economy and ordered complete lockdown in their countries. All schools, colleges, offices, factories, public places, etc. were shutdown from immediate effect.

As of 7th June 2020, COVID 19 confirmed cases worldwide are 69,94,605 with 4,02,453 deaths and 34,20,048 recovered.

The USA didn't impose lockdown in the early stages due to which it has nearly 19,88,545 confirmed cases with a death rate of 5.6% (as of 7th June 2020) whereas in India lockdown was imposed at the first stage, and so we have 2,47,000 confirmed cases with a death rate of 2.8%.

### Impact on Environment

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As we know it is us, Humans, who keep exploiting nature which has nurtured us and turn a blind eye to the havoc of our misdeeds. Current environmental concerns like depletion of the ozone layer, climate change, soil erosion, air pollution, water pollution, soil pollution, acid rain, noise pollution, loss of biodiversity, and many more are a result of our selfish and never-ending desires for development at the cost of the environment.

But when the lockdown was imposed worldwide, our lives just stopped. Air traffic (due to flights) dropped by 95% (Cntraveller). Since no one was allowed to leave homes, Carbon footprint per person dropped significantly. The Hindu newspaper reported a 17% decline in carbon pollution during the pandemic peak. According to an article in Economic Times on May 14th, 2020, Global air quality has improved this year due to lockdown.

Economic Times posted an article on 8th April 2020 titled "COVID 19: All world's now a zoo, only this time with animals on outside and humans on inside".

This sounds like lock down is good for Environment . Right?

Humans are getting what they deserved, animals are safe and the environment is healing due to a reduction in pollution levels.

But, NO.

All this is just the tip of the iceberg .

The reality is that humans, despite being under threat due to COVID 19, cyclones, earthquakes, and locusts attacks are still damaging the environment.

According to Voicesofyouth.org: " There has also been an increase in medical waste – much of the personal protective equipment that healthcare professionals are using can only be worn once before being disposed of. Hospitals in Wuhan, for example, produced over 200 tons of waste per day during the peak of their outbreak, compared to an average of fewer than 50 tons prior. "

According to Mongabay News: "Despite COVID, Amazon Deforestation is racing higher. The new figures come amid rising fears that illegal loggers and speculators are using the COVID-19 crisis as an opportunity to invade indigenous lands and protected areas in Brazil".

According to an article in Conservation International , an expert said " In Africa, there has been an alarming increase in bush meat harvest and wildlife trafficking that is directly linked to COVID-19-related lockdowns, decreased food availability and damaged economies as a result of tourism collapses"

Apart from the above-mentioned media channels, various other news articles have reported such incidents from various locations around the world.

Now, what do you think :

COVID 19 has helped the environment for good or just deteriorated it further? Check for yourself.

Follow social distancing guidelines . Stay Safe .

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url = "https://insights.blackcoffer.com/what-is-the-repercussion-of-the-environment-due-to-the-covid-19-pandemi"

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("104.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
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Article:

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BlackcofferWhat We ThinkHealthcare Due to the COVID-19 the repercussion of the environment

By Ajay Bidyarth - June 18, 2020 6352

Epidemics, in general, have both direct and indirect costs associated with direct and indirect measures adopted to counter (control) the epidemic which generally have both short-run and long-run economic and social consequences. The 2019 Coronavirus (COVID-19) outbreak globally lead a significant setback to the entire globe. The first case was detected on 26th December 2019 in China. The World Health Organization (WHO) prepared the first diagnostic kit on 14th January 2020.

As the global coronavirus or Covid-19 pandemic continues to take hold every economy is feeling its effect with a high degree of uncertainty taking a toll in all the manufacturing sectors. Supply chain management is an important area with many opportunities for our community to contribute in various forms. According to the data produced by Supply Management's Report on Business show that PMI (Purchasing Manager's Index) has declined 1% in the month of February. Mainly there has been a huge contraction in the Petroleum, Transportation and Textile Industries. Although there has been a fall in the inventory but is expected to grow due to supply chain disruptions leading to inefficiencies in material conversion and continued advanced stocking to protect production schedules. A analysis by trading platform Forex claimed that heavily 75% of all companies had already reported supply chain disruptions with more than 80% believing that at some point they would experience impacts as a result of Covid-19 disruptions. The effective shutdown of industrial activity i.e. China, ground zero for the virus presented particularly difficult problems for manufacturing firms worldwide. Imported goods invested by investors set a significant setback.

Several experiments were carried out by different governments across the globe to restrict the spread of this pandemic. Boris Johnson introduced the herd immunity plan in the United Kingdom which was a failure followed by a mitigate model which India also tried initially to stop the spread of the Covid-19 virus. The last and the ultimate model that most of the countries are applying is the Hammer and the Dance Model i.e. the Lockdown Model which is estimated to bring down the caseload by 25-30%. The Lockdown model basically means buying time to prep are the vaccine to kill the virus.

However, the lockdown has certain critical economic consequences which add to the burden of global distress. This can be explained using the standard macroeconomic Keynesian model. The lockdown and the spread of the disease have a direct negative shock on aggregate consumption levels and exports. This leads to a contraction in aggregate demand which leads to a fall in the market rate of interest and aggregate equilibrium output. The secondary effect on the commodity market is via investment demand function which can either increase owing to a fall in the market rate of interest, or fall owing to the contraction in aggregate demand. Clearly, the contraction of the Aggregate Demand-side generates an economic slowdown. On the other hand, restriction of workers gathering in the workplace owing to lockdown hurts the production in those sectors which need the presence of physical wo

rkers. Note that software or financial service-producing sectors are exempted from such negative supply shock at least in the short-run to medium-run since those works could be easily carried out based on "work from home" anthem. However, reverse migration of workers is an indication of a sharp cut down in production activities. This Aggregate supply shock leads to the situation of stagflation. In recent announcements by the Reserve Bank of India (RBI) to ease liquidity in the system may prove to be counterproductive provided the aggregate supply shock, since the escalation of demand specifically for non-traded products without an adequate increase in production (supply) would only result in inflation. In other words, supply-side management must go hand in hand with demand-side policies. Even if policies are undertaken at the national level by the government, however, conditions may not improve much due to shocks in the external sector through trade in commodities. Most imports are banned which will increase the economic cost of production of import substitutes within the domestic territory based on the theory of comparative advantage in a Ricardian sense. At the same time, exports are hurt due to lower demand from the developed economies. This shows that unemployment and inflation are inevitable in the near future.

Corona Virus has mainly affected raw material export-driven countries. With the Covid-19 virus in the backdrop there will be a decline in new orders, production, and employment with ease in supplier deliveries as demand will be less with a mild decline in the inventories. There has been a huge revenue impact. Long stretches of empty supermarket shelves and shortage of essential commodities are only the visible impacts to consumers of the global chain disruption caused by the Covid-19 pandemic. The uncertainties ahead swing between extremes. As the shortages worsen before they get resolved prices of many commodities could go up for consumers even if laws exist against price gouging. At the same time we should keep in mind that constrained supplies could cause a decline in demand which in turn may end up weakening prices. Risk Management process is not robust enough to cope with the fallout of the coronavirus pandemic. The seemingly relentless forces of globalization and technology with coronavirus in the backdrop will present us with new supply chain challenges and opportunities for further progress in the near future. There is a glimmer of good news as countries globally haven taken preventive measures but the recovery may be fragile.

The crisis due to the global pandemic is likely to be more serious for developing economies compared to the global financial crisis of 2008. This is due to the fact that the global financial crisis leads to lower demand for exports from the developing economies by the developed nations which further lead to contraction of export-based industries and other sectors in the developing nations due to inter-sectoral backward and forward linkage effect, however, the burden of retrenchments in the formal sector was absorbed in the informal sector. In the present situation, the problem of vanishing informal sector is evident since informal sector workers are more vulnerable to the spread of the disease due to the absence of non-regulatory authority and out of direct government control. Moreover, lockdown lead to massive close down of this informal units, thus the informal sector in this present set up is vanishing due to which the shock absorption capacity of developing economy like India is becoming weaker. The global economy is drowning towards deep cycles of economic depression and the aftershocks seem to be long-lasting. The only way of this global shock seems to be international policy coordination in line with the needs of the domestic economies

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url = "https://insights.blackcoffer.com/impact-of-covid-19-pandemic-on-office-space-and-co-working-industries/"

# Send a GET request to the URL
response = requests.get(url)

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soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

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# Print the results
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print("Article: ", article)
with open("105.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
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Title: Impact of COVID-19 pandemic on office space and co-working industries. | Blackcoffer Insights  
Article:

Home What We Think Impact of COVID-19 pandemic on office space and co-working industries.

By Ajay Bidyarth - June 18, 2020 6357

COVID 19 has bought the world to its knees. With businesses being shut, travel being banned, schools, and colleges being closed, we have observed an impeccable amount of sorrow and despise along with a great amount of mental torture and destruction. Though situations are improving now, and the lockdowns are being lifted, it is a fact that it cannot be shunned that this virus will have a long term impact on people, and the effects will not only be felt economically and physically but also mentally.

We've been reading articles regarding the impact of COVID 19 on the economy, education, mental health, and every other possible aspect. But one topic which has not been talked about much is the impact of COVID 19 on office space and co-working industries. Well, it is quite obvious that offices will start functioning now, but, the COVID period hasn't ended. This means that social distancing will also have to be followed in offices; where it will be a problem to do so because of the lack of adequate infrastructure and space. The same will be the condition in co-working industries, wherein employees of different companies come and work together under the same roof.

However, these problems are quite obvious (though people haven't thought about them much), but the fact which people fail to notice and understand is that the meaning of space is not only limited to infrastructural space which is measured in square foot or square meters; but it also extends to mental space, or for that fact, space in the minds of people for others and their thoughts as well as opinions.

Coronavirus has left a big scratch in our country; just the way a car needs repair after an accident, our country will also need repair after the control of this virus. But, unlike a car, our country will require a large amount of time to get restored and to stand straight without any support.

Needless to say, the economic stability of our country will definitely be hit because of this reason. But the problem is since the earnings of the employers will reduce, it will subsequently lead to a drop in the salary of the employees. While some employees might be preferred by their bosses and may receive a raise regularly, others might be subjected to unfair treatment and made to do the same amount of work for a lower salary.

People tend to overlook the thin line which exists between cooperation and competition. The problem doesn't arise when such a situation happens wherein an employee is getting paid more than the other, but instead, it arises when people start to compare their earnings as well as benefits to that of others. And in today's world, where people keep money at the top of their priority list, comparisons will play a very important role in the performance of employees and their company.

Since there will exist inequalities and partialities in companies, there will also exist a sense of hatred and competition among the employees of the same company; who will compete to get a better position or a raise in their salary. This may seem beneficial to some as it might compel the employees to work harder and better, but however, will bring huge losses in the long run. The fact is; employees might end up doing unethical acts which will help them to make a better impression in their boss's eyes.

Moreover, since there will be comparisons among the employees, it might happen that the 'Employee of the Month' ends up being hated by all other employees in the company. Another situation that might arise is that of bluffing and pretending; wherein employees tend to show that they work very hard but they don't. This might be practiced by showing the boss that they are working when he is on around, and then chilling the rest of the time when the boss goes home or sits in his office. In fact, employees might also lose interest in working if they sense repeated partialities and inequalities; which they might show by quitting the jobs or not performing to their best.

Such situations will definitely arise in companies and offices; wherein employees will compete for attention and resources; which will have a great impact on the company and its functioning. And all this will happen because of only one thing; lack of office mental space i.e. space in the minds of people working together in a particular office for cooperation and teamwork, along with ignorance of the fact that things will get better and eventually the same after some time.

Another kind of industry and companies that will be affected due to the long-lasting impact of COVID 19 is the co-working industry and offices. This is because, there will be a shortage of resources and the income of people, but the maintenance cost to be born for the infrastructure, as well the rent will remain the same. Because of this, employees will be told by the company owners to exploit the resources present in the offices and use them to the fullest; to compensate for the losses being born and to make better use of the money being used. However, the number of resources will be the same, and so, there will be a case of competition between employees of different companies to use resources and take benefits of the same.

If the above two situations happen to occur at the same time (which they most likely will), we will observe a scene of intra-company as well as inter-company competition. Also, our personal relations with other employees in the company might also be affected due to this comparison and competition; which itself will be a result of limited mental space.

COVID 19 will have severe impacts on the office (mental) space of companies and people. People's thoughts, how they treat others, along with accepting defeat and rejection will be an important aspect of everyone's lives. Moreover, we might also observe a shoot in the intensity and frequency of office people going to psychologists; because of repeated rejection and unfair treatment. However, we need to cope with this thing and realize that it is indeed very important for us to start preparing to expand our mental space and that this competition and comparison will not stay for long and should not affect our personal relations and life at any cost.

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title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

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with open("106.txt", "w", encoding="utf-8") as file:
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By Ajay Bidyarth - June 22, 2020 6877

Handicrafts is an art of making crafts by hand in India is called Indian handicrafts, in ancient India people lived in colonies called tribals and they were used to make utility items for their daily needs, that art of making the crafts called handicrafts, and the items called handicrafts goods.

Few of the Indian handicrafts are as follows

Pashmina ShawlsBidriware metal handicraftCane and Bamboo HandicraftsZardoziChikankari

The visual arts are art forms such as painting, drawing, printmaking, sculpture, ceramics, photography, video, filmmaking, design, crafts, and architecture. Many artistic disciplines such as performing arts, conceptual art, textile arts also involve aspects of visual arts as well as arts of other types. Also included within the visual arts are the applied arts such as industrial design, graphic design, fashion design, interior design, and decorative art.

Roles of handicrafts in Indian economy

Indian Handicrafts items have their unique impression and charm. This immensely big large-scale industry provides livelihood to 130 lakh weavers and artisans. Indian handicrafts are environment friendly and low in energy consumption. Indian handicraft items exported the most and generated good foreign exchange every year. Handicraft is very important because it represents our culture and tradition. It promotes the heritage of a country through the use of indigenous materials and it preserves traditional knowledge and talents. These days, the handicraft industry plays a vital role in the Rural Indian sector. Moreover, with liberal trade and the export of the Indian handloom industry is on an all-time high.

Some key facts of Indian handicrafts industry

The Indian Handicraft Industry is showing a continuous growth rate of 20% every year. Major parts of the industry operate in rural and semi-urban areas throughout the country and have potential Indian and International markets with around 67000 exporters to tap the market. According to the national census of handicrafts, undertaken by the National Council for Applied Economic Research the value of handicrafts produced last year were of Rs. 26,213 Crore. This Industry provides huge employment opportunities to artisans that include women and people belonging to backward and weaker society. This is one of the major sources of income there. The Indian Handicraft Industry is a \$100 billion industry worldwide. India's contribution to the world market is 1.2%. The total exports of crafts items: - Rs. 13412.92 Crore. Industry's share in India's exports: - 1.51 %

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# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using BeautifulSoup
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title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("107.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
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Big DataBlackcofferWhat We Think  
How COVID-19 is impacting payment preferences?

By Ajay Bidyarthi  
June 22, 2020  
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I would rather pay cash – Before COVID-19.

I would rather make online payment – After lockdown.

During this lockdown, one can observe a number of small positive changes in our surroundings. One such positive change is using online mode of payment even if they are small in amount as it counts as a big step towards DIGITAL INDIA and self-development as well.

According to Economic Times, 42% of Indians say that they have started using online mode of payment. Some small tasks like mobile phone recharge, bill payments, buying groceries, etc., are some essential tasks that cannot be ignored, and making an online payment is way too convenient for them. Also, multiple schemes have been initiated by the government to promote online payments like Lucky Grahak Yojana and Digi Dhan Vyapari Yojana. The details of the same are as follows:

LUCKY GARHAK YOJANA

A daily reward of Rs 1000 to be given to 15,000 lucky consumers for a period of 100 days. People who use the online mode of payments will get weekly prizes worth Rs 1 lakh, Rs 10,000 and Rs 5,000. (All types of online transactions will be included in this.)

DIGI DHAN VYAPARI

Prizes for Merchants for all digital transactions.Rs 50,000, Rs 5,000, and Rs 2,500 will be provided weekly.

The frequently used apps by the consumers and the market share of apps are as follows:

Paytm- 33%

Google Pay- 14%

PhonePe- 4%

Amazon Pay- 10%

BHIM- 6%

Other Apps- 33%

Not only the sellers but also the buyers have taken a step forward in making online payments and have been exploring the various offers and discounts. The sellers have started their own online shops and made online payment mandatory in highly contaminated zones. The buyer has also taken advantage of home deliveries to follow social distancing. To add to the advantage of buyers and sellers KYC is no more a necessity to make money transfers. There has been an increase in the services provided by banking sectors as well. The FM Nirmala Sitharaman has provided the directions to not charge for cash withdrawals from ATM's. Various services like sending and receiving money, blocking cards, credit card payments, credit card pins, etc., are being provided online.

E-payment options like Paytm, etc., have been open up for investing money online in stocks, insurance, etc. Even online shopping apps like Amazon have come up with various offers for their in-built wallets.

Emerging technologies and high competition among online payment apps are providing benefits to buyers and sellers as well. Sellers have been able to increase their reach with online shops and online payment stands as a guarantee for them. Buyers have been in the most advantageous position ever after the digital payment has come into the market. They are being provided with a number of choices to choose from as well as make instant payments for offers. This all sums up the likeliness of digital payment in the market. So yes, we can say, YOU (DIGITAL PAYMENT) HAVE A BRILLIANT FUTURE, CHILD!

We all have heard this statement "Precaution is better than cure" and here is the time to follow the same. It has been proven as a fact that the coronavirus can persist on paper for four or five days. That means the coronavirus can persist on the paper currency for four or five days. Thus, it is important to avoid the usage of paper currency.

A revolution will take place only when the below poverty population of India will start using the online mode of payment and will be literate enough to not get caught in any scam.

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from bs4 import BeautifulSoup

url = "https://insights.blackcoffer.com/how-will-covid-19-affect-the-world-of-work-2/"

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
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How will COVID-19 affect the world of work?

By Ajay Bidyarthi  
April 29, 2020  
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As business close to help prevent transmission of COVID-19, financial concerns and job losses are one of the first human impacts of the virus;

Not knowing how this pandemic will play out also affects our economic, physical and mental well-being; Despite this fear, businesses and communities in many regions have shown a more altruistic response in the face of crisis – actions which could help countries preparing for COVID-19.

COVID-19 is in decline in China. There are now more new cases every day in Europe than there were in China at the epidemic's peak and Italy has surpassed it as the country with the most deaths from the virus. It took 67 days to reach the first 100,000 confirmed cases worldwide, 11 days for this to increase to 200,000 and just four to reach 300,000 confirmed cases – a figure now exceeded.

#### The Human Consequences

In recent weeks, we have seen the significant economic impact of the coronavirus on financial markets and vulnerable industries such as manufacturing, tourism, hospitality and travel. Travel and tourism account for 10% of the global GDP and 50 million jobs are at risk worldwide.

Global tourism, travel and hospitality companies closing down affects SMEs globally. This, in turn, affects many people, typically the least well-paid and those self-employed or working in informal environments in the gig economy or in part-time work with zero-hours contracts. Some governments have announced economic measures to safeguard jobs, guarantee wages and support the self-employed, but there is a lack of clarity in many countries about how these measures will be implemented and how people will manage a loss of income in the short-term.

Behind these statistics lie the human costs of the pandemic, from the deaths of friends and family to the physical effects of infection and the mental trauma and fear faced by almost everyone. Not knowing how this pandemic will play out affects our economic, physical and mental well-being against a backdrop of a world that, for many, is increasingly anxious, unhappy and lonely.

Fear of the unknown can often lead to feelings of panic, for example when people feel they are being denied life-saving protection or treatment or that they may run out of necessities, which can lead to panic buying. Psychological stress is often related to a sense of a lack of control in the face of uncertainty.

In all cases, lack of information or the wrong information, either provided inadvertently or maliciously, can amplify the effects. There is a huge amount of misleading information circulating online about COVID-19, from fake medical information to speculation about government responses. People are susceptible to social media posts from an apparently trustworthy source, often referred to as an "Uncle with a Masters"-post, possibly amplified and spread by "copypasta" posts, which share information by copying and pasting and make each new post look like an original source, as opposed to posts that are "liked" or "shared" or "retweeted".

Sadly, criminals and hackers are also exploiting this situation and there has been a significant rise in Corona virus-themed malicious websites, with more than 16,000 new coronavirus-related domains registered since January 2020. Hackers are selling malware and hacking tools through COVID-19 discount codes on the darknet, many of which are aimed at accessing corporate data from home-workers' laptops, which may not be as secure as outside an office environment.

Social distancing and lockdowns have also prompted altruistic behaviors, in part because of the sense that "we're all in this together". Many people report being bored or concerned about putting on weight; others have discovered a slower pace of life and by not going out and socializing have found more time for family, others, and even their pets.

The downside of self-isolation or social lockdown are symptoms of traumatic stress, confusion and anger, all of which are exacerbated by fear of infection, having limited access to supplies of necessities, inadequate information or the experience of economic loss or stigma. This stress and anxiety can lead to increased alcohol consumption, as well as an increase in domestic and family violence. In Jingzhou, a town near Wuhan in Hubei province, reports of domestic violence during the lockdown in February 2020 were more than triple the number reported in February 2019.

#### Essential Actions From The Business Community

Health measures must be the first priority for governments, business and society. It is important for businesses to show solidarity and work together to protect staff, local communities and customers, as well as keeping supply chains, manufacturing and logistics working. According to research, "my employer" is more trusted than the government or media. Daily updates on a company website with input from scientists and experts are recommended to counter politicized messages in the media and from governments. This is particularly true for large companies that have the capacity to do this.

Messages about what businesses are doing for their employees and in their communities is also important. Some companies are helping schoolchildren from vulnerable families who can no longer get a school meal; others are providing public health messages about effective handwashing. Even CEOs can show they are working from home and self-isolating, while still being effective in their leadership.

Following WHO advice, there is a need for the business community to move from general support to specific actions and focus on countries' access to critical supplies, including a "Community Package of Critical Items" (a li

st of 46 items that all countries need). Of these items, 20 are either not available locally or available stock s are too limited. These missing items fall into four categories:  
Hygiene: Chlorine, HTH 70%, alcohol based hand rub, liquid soap; Diagnostics: lab screening tests, lab confirmation tests, enzymes, RNA extraction kits; PPE: gowns, scrubs, aprons, sterile gloves, protective goggles, face shields, masks (N95 or FFP2); Case management equipment: oxygen concentrators, oxygen delivery systems, mechanical ventilators.

The call for action is for more money, to work with manufacturers to create capacity and to organize purchasing so there is guaranteed access, especially for poorer countries with less resilient public health systems. The concept is to create a global security stockpile of supplies and equipment, an effort that needs: Emergency financing Access to and increases in manufacturing capacity Access to national and supplier stockpiles Warehouses and distribution capacity

Blackcoffer Insights 17:-Jatin Tiwari, Gurukul Kangri Deemed University, Haridwar

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By Ajay Bidyarthi - April 29, 2020 6236

So, not beginning with once upon a time because it is not a fairytale. Before the advent of this deadly virus called Coronavirus or with all love that we might want to call it COVID-19, the life wasn't smooth as people are cribbing about.

It is written by Adam Smith that Human wants are endless and thus we know humans can never be satisfied. When we were busy and all the work and stressful lives, we all wanted breaks, we used to crib and cry about not getting time for family and friends. Not having time for self

This Coronavirus outbreak had taught each one of us that :

How important it is to be thankful for everything we have in our lives while sitting I just realize that how lucky we are that we do not have to go out amidst this crisis to work and earn bread. How sorry I'm for each the daily wage workers who have no other way but to go out

The second lesson is that we all can survive without fast food, we all are chefs and have made a lot of appealing and tasty dishes without spending a huge and bogus amount.

The third lesson is family is everything, during this quarantine I realized that spending time with my family is so stress-busting and helps me be creative.

We need to have other hobbies than going out and chilling.

We need to look at the weather, it's April and it is not that scorching heat we used to face, it's lovely, nature is recovering. Whenever I wake up in the morning I go to my terrace for Yoga and find many families there, walking, gossiping, it has brought everyone close. Mended relation.

All the Instagram stories make me realize that we all have talent just we don't have time to self introspect, we all are running in a race to be the best.

From an economic point of view, though savings are leakage in the money flow but still savings are important for unforeseen circumstances.

This lockdown has given us all time to reconnect and get together with all our loved ones, to do what we want. The main lesson is that we should enjoy life and every moment as it is. We never know what might happen to anyone. We never know who could be the last person we are talking to, last person we text, let us all be nice to each other

There are many lessons that we have learned. One of them is the awareness about the cleanliness. The term CLEANLINESS, that took Modi Ji about 5 years to teach people about Swachh Bharat Abhiyan, a single case of the virus has taught everyone the importance of cleanliness and hygiene. Corona Virus crisis has taught how the humans at halt can lead the nature to work at itself.

Nature has its own mysteries and how what the humans have done to its beings is done to them, they are too imprisoned like the animals they have had imprisoned for years away from their homelands.

This Crisis has gaped the differences between the communities and brought the Humans together.

We can see a wave of excitement in everyone when Modi Ji gives his tasks. Still, remember how my colony just rang up with the sound of bells and plates and claps. And how beautiful it looked with the balconies lit up with Diyas and Candles. It looked like Diwali in the month of April but Diwali with no pollution and noise.

This crisis has made everyone of us thankful to the medical and nursing staff who had been working 24x7 hours , away from their families , so that we can stay safe with our families .

It has just made me realize that we never know , if we'll see the sun tomorrow , If we'll see the people we love , if we can talk to them again , so let's not hold grudges and let the go and flow .

Corona Virus has united all the humanity against a cause to defeat a virus, this virus has made the world a better place, there are no terror attacks, there are no rape cases, there are no murders, no loots. The Earth is all healing.

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BlackcofferWhat We ThinkHealthcare COVID-19: How have countries been responding?

By Ajay Bidyarth - April 29, 2020 6290

The COVID-19 pandemic is impacting communities all over the world.

With 149 offices in countries worldwide, WHO is leading the global effort to support countries in preventing, detecting, and responding to the pandemic. WHO is also monitoring the response: 143 countries have now their own COVID-19 response plans, and almost all (194) countries have adopted public health and other response measures based on WHO's guidance.

The response also covers the procurement of supplies. As of 2 March, WHO has bought and shipped 1.5 million coronavirus test kits and close to 800 000 face masks across the planet, delivering personal protective gear to more than 70 countries. At the same time, more than half of WHO's personnel are responding on the ground by providing real-time updates, expertise, and coordination as governments, humanitarian agencies, and the public race to respond.

Countries are adopting different ways to contain the spread of coronavirus but there is no one-size-fits-all approach.

Towns and cities have been locked down and large gatherings banned.

Restrictions have been imposed on travellers from hard-hit areas, such as China, Italy and Iran.

Major sporting events, carnivals and events have been postponed or cancelled.

The COVID-19 coronavirus has now spread to every continent except Antarctica, challenging health systems and governments everywhere. Although the vast majority of the almost 90,000 cases around the world are in China where the virus originated, 64 different countries\* are now affected.

For most, the virus represents a mild health issue, but for vulnerable members of society the consequences can be more serious. Containment remains a priority for all countries but there is no one-size-fits-all approach to tackling the spread of the disease.

France

The French government has advised its citizens to abandon the customary "bise" greeting – involving kissing each other on the cheek – in a bid to slow the spread of COVID-19.

Public gatherings of more than 5,000 people are also off limits, resulting in the cancellation of events like the Paris Half Marathon. Following the decision, the Louvre museum in Paris closed its doors to the public to mitigate the threat of infection posed by visitors arriving from different parts of the world.

Iran

As the Middle East's worst hit country, nearly 3,000 cases of COVID-19 have been reported in Iran, including more than 20 lawmakers. The country's parliament has been suspended indefinitely and MPs have been asked to cancel all public meetings.

Iran's death toll is the third highest, after China and Italy, and medical supplies are running short. Exports of face masks are banned for three months, while Iran's factories produce new supplies for local people.

Germany

German Health Minister Jens Spahn has declared coronavirus a 'worldwide pandemic', something the World Health Organization has not concluded at this point. The government has banned the export of medical equipment, as Spahn said the virus there had not yet reached its peak.

United States

California has declared a state of emergency after the first death in the state, which brought the U.S. death toll to 11. The move follows Washington and Florida both declaring a state of emergency, with 10 of the deaths in Washington state. The government is preventing entry to anyone who has visited China in the last 14 days and has expanded testing nationwide.

Switzerland

Precautionary measures are in place in Switzerland, where gatherings of more than 1,000 people have been banned, forcing the cancellation of annual events like the Basel Carnival and the Geneva International Motor Show. Interior Minister Alain Berset has also advised against using the country's customary three-kiss greeting

Austria

Authorities in Austria imposed a ban on trains travelling on key international routes to and from Italy, such as the Brenner Pass. The move followed two suspected cases of coronavirus discovered on a train heading from Italy to southern Germany, which later tested negative. The temporary ban has now been lifted, allowing scheduled rail services between Austria and Italy to resume.

Italy

Italy has shut all its schools and universities for 10 days, as the government also banned public conferences and cultural events to curb the spread of the virus, which has already killed more than 100 people.

Some towns in northern Italy's Lombardy region are in lockdown. Restaurants and businesses are closed, threatening to plunge the country into recession.

Curve of confirmed Covid-19 cases outside of CHINA

China

At the epicenter of the outbreak, China has adopted aggressive measures to contain the virus, including city lockdowns, travel restrictions, extending school breaks and closing down theatres, sporting events, and other pub

lic venues. Infection rates continue to increase, but the rate of increase has slowed.

#### Hong Kong

Hong Kong's border with mainland China has been closed, preventing visitors from entering the territory. Without the throng of global tourists that usually flock to Hong Kong, the economy has been hit hard. Schools are closed until April, and many flights in and out have been restricted or canceled. Hong Kong's recently unveiled budget included a government payment of more than \$1,200 for each resident to help ease the economic pain.

#### Japan

Japan's Prime Minister Shinzo Abe has called for all elementary, middle, and high schools to close until late March, impacting millions of students. The threat posed by the virus could jeopardize the Tokyo 2020 Olympic Games, due to be held in the summer, although no decision to cancel the event has been announced.

#### Saudi Arabia

No coronavirus cases have been detected in Saudi Arabia, but there have been some in regional neighbours like Kuwait and Bahrain. Authorities have barred entry to the kingdom for foreign pilgrims from 25 countries, preventing visits to Islam's two holiest sites – Mecca and Medina.

#### United Arab Emirates

Ferry services between the UAE and Iran have been suspended and all commercial ships must provide health statements for crew members 72 hours before arriving in the country's busy ports.

#### South Korea

South Korea has the most cases of any nation outside of China. Strict self-isolation requirements are in force throughout the country, with fines or a potential prison sentence awaiting anyone found violating the rules. After military personnel tested positive for the disease, planned annual joint military exercises with US forces have been put on hold.

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By Ajay Bidyarth - April 30, 2020 6372

While Coronavirus has affected the life of every individual, it has also affected various industries for better or for worse. While certain industries like Pharma, Mobile and Web-streaming industries, Fitness and Teleconference apps have boomed during this pandemic, industries like Tourism, Fast-Food Industry, Retail and Leisure sectors have suffered the worst hit due to Coronavirus Impact

During this lockdown to prevent the spreading of Coronavirus Impact, almost all of the companies have adopted a work-from-home culture and have used various Teleconference apps to hold meetings. Teleconference apps are also being used by college institutions and universities so that the studies don't get disrupted. Also, confined to their homes, people have started engaging more in fitness apps, and web streaming services like Netflix, YouTube, and Amazon Prime are at their zenith.

While these industries are thriving in this pandemic, the most affected industry during this time is the Hospitality Industry.

Hospitality Industry embodies various sectors like transportation, traveling, airlines, hotels, and lodges, etc. Hotels and traveling are also a major part of the Tourism Industry. The tourism and Hospitality industries may appear somewhat similar, but they have their subtle distinctions. Tourism mainly involves traveling and services to those who are away from home. The hospitality industry involves businesses and services that are concerned with leisure and enjoyment and mainly run on customer experience and satisfaction. Their customers may also be local inhabitants along with tourists.

The hospitality industry can be majorly divided into Accommodations, Travelling, and Food and Drinks.

Accommodations include hotels, resorts, hostels, motels, etc. The best of the hotels and resorts that were basking at their peaks, now have no option but to lay off their employees. Many hotels are down to zero occupancies and have led to an immense loss for the hotel establishments. The same is the case for resorts, hostels, motels, etc. that provide accommodations. Since there are no occupants, there is no money inflow, which is leading to the layoffs of employees as the owners are not able to provide paychecks anymore.

Businesses in the accommodation sector that have just started, are finding it difficult to cope up with this situation. Various governments have extended small business bridge loans to cope up with this situation. The accommodations sector has no other way to cope with this situation but to wait for the situation to improve so that they can improve their business.

Traveling restrictions are imposed by various governments to avoid the spreading of Coronavirus. Travel agencies, car rentals, tour operators, flights, and airlines have been hit quite severely by COVID-19. Due to the fear of spreading Coronavirus, people have limited their public outings or have stopped stepping out altogether unless to shop for daily essentials. Coronavirus Impact on travel that ban lays out restrictions on who can travel from where to where. Many international and domestic flights have been suspended to tackle the Coronavirus crisis. Havoc is created across the aviation industry.

The months from March to May are said to be the busiest times of the year for the tours and travel industry. But people are reluctant to travel in the fear of catching Coronavirus or getting stuck abroad if the governments announce restrictions, thereby overstaying their visas that can imply their future travels abroad. Airlines and tourism agencies have stopped marketing and advertising as it would be irresponsible and does not make sense during this crisis.

To cope up with this situation, airlines like Virgin Atlantic and American Airlines have started deploying passenger flights to carry cargo, while various airlines have laid off. Commercial travel has dropped tremendously. Also, there is a recent drop in jet fuel prices. It is being estimated that many airlines are going to go bankrupt if this situation persists.

Apart from airlines, the cruise industry and travel agencies also take a toll this year. They are facing cancellations of bookings, and some new travel agencies are at a risk of closing down rendering all their employees either losing their jobs or going on unpaid leaves in this time of crisis.

It is predicted that once the pandemic is over or the situation is under control, the travel and tour industry can take about 10 months to return to normalcy. However, this outbreak may affect the entire tourism industry's future.

Many foods and drinks services fall under the hospitality industry as they offer people services that provide them leisure time. Their customers not only include tourists but locals, passerby's, etc. These mainly include restaurants, tea and coffee shops, bars and pubs, catering, etc.

Catering is provided at places mainly where there is a social gathering, to deliver food and drinks services where it is not provided or not according to the organizer's preference. Due to this pandemic, many countries are in lockdown, and even those that are not in lockdown are not allowed to hold public gatherings as a safety precaution. Due to the avoidance of public gatherings and events to maintain social distancing, catering services are halted for now.

Restaurants, tea and coffee shops, pubs, and bars have all closed down not only for the safety of their customers but also keeping in mind the safety of their employees and workers. However, a few restaurants that offer food delivery are still working, by taking all the necessary health and sanitation precautions to prevent the spreading of Coronavirus. The number of such restaurants seems to be declining with the increasing cases of COVID-19 as the customers are becoming more and more afraid and cautious about the situation. Though, quick-service food deliveries can cope better than the full-service restaurants during this crisis.

Because of this unprecedented crisis, all these industries that are being affected are hoping for government support to make it through such tough times. Without some financial support or help from the government or other institutions, it will be difficult for various establishments to survive through this crisis.

It is being indicated that the world will face the worst recession since the Great Depression during this pandemic with so many people losing their jobs, especially those working in the hospitality industry. Thus Coronavirus Impact on different industries

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How will COVID-19 affect the world of work?

By Ajay Bidyarthi  
April 30, 2020  
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A respiratory illness that started from patient zero in Wuhan, a city in China, has now engulfed the entire globe in its clutches. With over 2 million confirmed cases and deaths north of 100,000, Coronavirus, better known as COVID-19, is a challenge unfathomed. History is earmarked with infections and diseases that ravaged continents time and again—Black Death decimated Europe by claiming 200 million lives between 1347 and 1352, Smallpox killed 500 million over decades, bouts of Cholera outbreaks, the emergence of HIV/AIDS and what not—the list is huge and intimidating. But COVID-19 is cut from a different cloth, exposing various loopholes and the modern world's inability to fend off pandemics and epidemics despite advancements in Science, healthcare, and technology. The COVID-19 pandemic has invoked an unprecedented seismic shift across segments—the world economy is declining, third world countries with underdeveloped healthcare industry are spiraling into poverty and darkness (read about Ecuador being trapped between death and debt), the IMF declaring a global recession—it's a concoction of tragedy, turmoil, and tribulations. One particularly interesting domain to mull over is the world of work, an umbrella term that encompasses industries, businesses, organizations, and all that jazz.

Hundreds of thousands of layoffs are happening in sectors like travel and tourism, hospitality, manufacturing, and basically every other customer-facing domain; not to mention those which rely solely or heavily on physical labor. Quarantine, a measure proposed and already implemented by hundreds of nations to limit the spread of coronavirus, has stopped people from going to their workplace. Offices are empty, factories are silent with machines gathering dust, hotels and restaurants are deserted, etc. The outcome has compelled organizations to remain strong in the face of this adversity and circumvent the problem of employees not being able to step out of their homes. The concept of work from home or WFH is now mainstream and the irrational ideology of decline in productivity and revenue upon implementing WFH has gone for a toss. The surge in the use of video conferencing apps attests to this. Zoom, a popular video call software, has witnessed more than double the number of users in March. Organizations are now cognizant of WFH and its benefits.

The onslaught of ‘normal’ working conditions by COVID-19 has made companies revisit the concept of redundancy. It is time to re-evaluate one’s workforce and underline core jobs essential to keeping the company running while highlighting the not-so-important ones. Of course, to render employees jobless and terminate them at this point casts a negative light on the organization’s reputation. So, companies are smart enough to ward such drastic cost-cutting measures at the moment—a few that did so are under the radar of their respective governments for the wrong reasons. It’s not unreasonable to expect corporations to impose significant changes in workforce strength and hierarchy once economic rectitude kicks in.

With passing time, more and more countries now have lockdown measures in place. Confined within homes, those with jobs now see the term ‘work-life balance’ unravel. The vicious cycle of work-wake up, go to the office, back at home, have food, sleep, and repeat the same all over again—is a hot-button topic today. The disastrous conse

quences of burnout at work, job-related stress and the consistent pressure to perform are at the receiving end of much-needed attention like never. Often neglected aspects of life like health, family, contentment, and well-being are not taken for granted anymore. The canard that coronavirus and its virulence is restricted only to the aged has been put to rest. With fatalities in every age-group, workers now grasp the importance of neglecting health for office. Once life's back on track, a reduction in work-related burnouts and health issues is imminent.

Boredom and restlessness (brought about by lockdown) have compelled people to upskill themselves; the presence of MOOC and online courses has buttressed e-learning/online education. LinkedIn is now riddled with professionals flaunting the latest certification from Udemy and Coursera. It took a pandemic for many employees to correlate continuous learning with success and recognition at the workplace. After a couple of months, you'll find yourself surrounded by smart peers whom you didn't heed to earlier.

Under the pretext of pursuing long left hobbies and passions, the number of active freelancers has increased. Individuals pressed by office workers are using the extra time at hand to take up freelancing and augment their primary source of income. Content writers, copywriters, graphic designers, tutors are now dime a dozen. Will freelancers sustain this flow once the health scare settles? We don't know. But, COVID-19, without any second thoughts, has given a leg-up to the freelancer culture.

Working across time zones has always been a bummer. Converting Indian Standard Time to Eastern Time Zone, Central Time to some other time zone, etc. for meetings meant ensuing headaches. To ensure the business continues, employees divided by geographies are now more accommodating to get cross-functional tasks done. Organizations are witnessing better coordination and collaboration across teams sitting in different parts of the world.

Car manufacturers are developing ventilators, hundreds of tech ventures are building COVID trackers, predictors, assistant chatbots and awe-inspiring apps, logistics are bending accepted ways to deal with transportation—an influx of change for good lies in front of us. Unimaginable innovation and creativity have risen from the depths of oblivion!

The dark side of social media i.e. the use of such platforms to spread rumors and false news is has become more evident than ever. An Indian IT giant expelled one of its employees in lieu of his abominable Facebook post to spread Coronavirus. Organizations will heighten vigilance of what their staff post, publish, or advocate on digital platforms. Condemnable information would bring in dire consequences that extend beyond simple termination. It seems social media has taken a hit for good.

All in all, the global outbreak of COVID-19 has ushered in a slew of radical changes to how work is perceived in the grand scheme of things. 2020 will go down in history books as the year that shook the very fundamentals of the world of work!

Blackcoffer Insights 17:-Piyush Mishra,Huron Consulting Group

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By Ajay Bidyarthi - April 30, 2020 6483

The hospitality sector in India has witnessed unprecedented deceleration this year in the wake of the COVID-19 pandemic. The Indian hotel sector has been hit hard, tussling with significantly low demand, with very few future bookings. Since the outbreak of COVID-19, companies have been canceling interviews at the top hotel management colleges in India. The overall hiring sentiment in the country is witnessing a negative impact in the short term with 60-65 percent of interviews getting postponed, especially in the hospitality services sector, following the slowdown across industries triggered by the coronavirus pandemic. Even the students who were aspiring for a career in the hospitality industry are on the verge of full swing. Currently, with the imposition of Section 144, there are barely any bookings being made for the future, and the current ones all stand canceled. In this scenario, there is limited scope for quick revival.

It's proud to see that this sector shows its maturity level: in working together, showing their true hospitality commitments in helping out our society where they can. For example by making their venue available for hospital beds and hospital employees. The situation we are in also brings new business models and opportunities, in defining, for instance, new delivery concepts, human capital sharing platforms, initiatives in promoting the "staycation or holiday concept" and the use of the less productive time to work on activities that were normally pushed forward like asset counts, security plans, defining standard operating procedures, social media plans, etc.

#### WHAT HAS CAUSED THE PANIC?

This may seem obvious, but it's worth looking at this a bit closer. The main reason there was such widespread panic was that the government announced its advice to avoid public meeting places like restaurants, bars, and pubs without simultaneously announcing a complete ban or a plan to support the businesses whose revenue streams they'd just denied. Many of these businesses operate on low margins and very fragile cash flow already so the prospect of survival for an indefinite period of time without income seemed very bleak indeed. This has taken a mental toll on already stressed business owners and their worried staff.

#### FACTS & FIGURES – Coronavirus Effect on the Hospitality:

The impact of the novel coronavirus on India's hospitality sector jobs is nothing short of severe. While most economists expect things to rebound in the latter half of the year, uncertainty still lurks. A sheer job trauma is staring at the hospitality industry in the near future. This is as the chances of losing a job are at high risk. Furthermore the entry-level has postponed the hiring for the near future. Let us check here some of the facts concerning the drop in the various hotel occupancy sectors.

The country's daily hotel occupancy dropped to 11% during 23-29 March, according to preliminary data from STR, Department of Revenue, Ministry of Finance, Government of India due to COVID-19 concerns, and limitations that have intensified in India.

Along with a steep downward trend in occupancy, the average daily rate (ADR), and revenue per available room (RevPAR) have also dropped significantly in India. ADR, which has dropped year over year by around 20% or more for eight consecutive days, went as low as INR4, 924.18 on 28 March. RevPAR attained its least absolute level (INR537.54) on 22 March.

In India, both luxury and budget hotels are running at just 10 percent of occupancy levels as thousands of people have canceled their trips. This may further worsen in the times to come at least till the end of this year. For instance, Airbnb announced its guests could cancel their reservations for a full refund.

The overall revenue of the Indian hotel sector is set to decline by anywhere between US\$ 8.85 billion to US\$ 10 billion, reflecting an erosion of 39% to 45% compared to last year.

Besides the actual business loss, the hotel owners will also incur losses due to fixed operating expenses, debt repayments, interest payments, and several other compliances required to be undertaken as part of the sector. With hospitality and travel sectors among the worst affected by COVID-19, OYO's entire executive leadership (CXOs) team has taken a voluntary pay cut, starting at 25%, with many opting for a supplementary untapped amount, and some going up to 50% to enable constructing the runway for the company.

Ritesh Agarwal, the Founder & Group CEO, OYO Hotels & Homes, has decided to forego 100% of his salary for the rest of the year in the wake of the novel coronavirus crisis.

#### Proposed Action Plans -Coronavirus Effect on the Hospitality

The hospitality industry can use this chasm to prepare for the upcoming demand by focusing on marketing and upgradation. This 'Stop Gap Plan' is about maintaining a thread of communication, using social media and advertis

ements, with the consumers. It's also about strengthening the communication within the company, making a budget and plan for re-opening, and utilizing this period to fix and upgrade whatever is possible. Another step is where all the action is required by the sector. Once the outbreak of the virus is contained and the world is set to travel again, it is suggested that any plan of re-opening must be done keeping long-term benefits and safety compliances in mind. It is imperative that hospitality companies reach out to deferred and canceled bookings and give due attention to domestic travelers. The hotels and airlines must slowly roll out their services rather than starting everything instantly and not get caught up in spending. This way Coronavirus Effect on the Hospitality

#### A Way Forward: Recommendations for the Government of India

The government is already taking measures to combat the effects of the pandemic on the country. Here are the multiple measures, if taken by the government of India, can help the Indian hotel industry weather the current storm.

Stimulus package to stabilize and support the hospitality sector in the near term, including a workforce support fund to ensure that there are no job losses.

Provide a moratorium of ~ 6 – 12 months on all loans (principal & interest), including working capital payments and overdrafts.

Ensure that credit rating agencies do not downgrade ratings of businesses, due to the expected volatility of the business in the short to medium term.

Provide a 12-month corporate tax holiday to travel, tourism, and hospitality sectors.

Defer all statutory dues such as advance tax, custom duties, excise duties, PF, bank charges, etc. at the central and state level for 12 months.

The government authorities must ensure that there is adequate availability of collateral-free and interest-free credit for organizations in the hospitality, travel, and tourism industries.

#### WHAT WILL CORONAVIRUS LEAVE BEHIND?

Really this is anyone's guess. We don't yet know how long it will take for the epidemic to peak and for us to be allowed out again, but one thing I am sure of is that we'll all be desperate to meet up with friends over dinner or have a pint in the pub! With proper support from the government I think the hospitality industry stands a good chance of bouncing back quickly, but perhaps not in its former form. It is likely that we will see a kind of natural selection take place among restaurants, leaving space for innovative new entrants. The crisis has already forced several restaurants to innovate by developing new services and perhaps, if regulation allows, these will stick, becoming new models for restaurants in the future and offering them a more diverse and resilient set of revenue streams. Thus Coronavirus Effect on the Hospitality and other sectors.

Blackcoffer Insights 17:-Radhika Kejriwal,IMT Nagpur

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Home What We Think Estimating the impact of COVID-19 on the world of work

By Ajay Bidyarth - April 30, 2020 6260

### "Stay at Home", "Crisis", "Pandemic", "COVID-19"

These are just a few terms that come to mind when you wake up every morning and listen to the world mourning. With the Coronavirus pandemic hitting almost 210 countries throughout the globe and having no possible cure for the foreseeable future, the state of the world is as dismal as it can ever get. The "Great Lockdown" as it is being called is having adverse effects on almost everything a common man does but more importantly having a grave impact on the world of work. In this article, let's look at what is the current status of the working population throughout the world and what lies ahead in the future.

2020 marked the beginning of a new decade and a seemingly difficult one for various organizations across the world. The first quarter of 2020 brought with it, major issues for the workforce. The implementation of lockdowns in various countries such as India, Germany, Italy, China, the UK, etc. has made "Work from Home" a compulsion for everyone except those working for essential goods and services companies. The crisis has already led to a worldwide economic slowdown and a period of recession is looming on our heads. The International Monetary Fund (IMF) has predicted a shrink of 3% in the Global GDP indicating the extent of the crisis. The severity of the issue is being felt by various big companies in India and other major powers of the world. In an interview, Anand Mahindra, CEO of M&M Group said that the manufacturing and production sector has been hit the hardest with the lack of labor force. He mentioned the lack of wage workers who help in loading and unloading of material is making transport a major issue for his company, also hinting at the importance of these small workers on the macro-level. CEOs and Managers of various organizations are having a hard time dealing with this crisis. With almost all MNCs such as PwC, BCG, Deloitte, IBM, Infosys, etc. making "work from home" compulsory till around mid-May' 20, the importance of technology is at its peak now. Whether it's conducting meetings over Zoom or conference calls over Duo, staying at home and working is becoming normal as we move forward. Service-based companies are finding it easier to complete their tasks as compared to Product-based companies. According to the IMF the world is going to lose USD 9 Trillion in output in 2020 which is more than the combined output of both Germany and Japan.

The manufacturing sector is one of the worst-hit by the pandemic. China, the world's largest exporter of goods and the epicenter of the COVID-19 pandemic has seen a significant fall in output in the first two months of 2020. Chinese Industrial Production has fallen by 13.5% and major manufacturers in China are facing problems relating to the shutdown and lack of workforce. Restrictions have affected the supply of Chinese companies like JCB, SAIC, Nissan to name a few. Organizations such as Samsung, Kia, Hyundai, and all other non-essential goods companies have been forced to shut down factories to comply with lockdown norms and for the safety of their employees. Indian manufacturing giants such as Bajaj and Tata have taken the toll due to the lockdown measures in India. Bajaj has been forced to cut employee salaries by 30% and worker salaries by 10% due to a lack of revenue. US-based smartphone and tech giant Apple Inc. has shut all its stores worldwide with its factories in China and the USA unable to produce new products for the time being. These are just a few examples and production has been hit globally in all countries and there is a lack of demand to compliment this, further enhancing the problem faced by producers.

The world of work also includes those who are willing and able to work but cannot find a job, i.e., the unemployed. The unemployment rate is at a staggering high across all nations affected by the pandemic. According to the US Bureau of Labor Statistics, the number of people filing for unemployment hit a record high close to 7 million people. China reported an unemployment rate of 6.2% in Jan'20 and figures are expected to get worse in many other countries. According to the International Labor Organization, more than 25 million workers may go jobless soon due to this crisis and lead to a significant decline in income. The financial crisis of 2008 caused a 22 million spike in unemployment worldwide and the nature of the current situation makes it more dangerous. The fall in revenues and effects on both supply as well as demand mean that companies are having a hard time maintaining their balance sheet and taking care of their liabilities. Lack of job opportunities from the next quarter and salary cuts for existing employees might be the way forward in the corporate world.

Amongst all the negative impacts of COVID-19 on organizations across the globe, there are a few opportunities that are ready to be explored after this crisis. Technology and Artificial Intelligence are key aspects that have been mentioned in the past to be the ones contributing to the growth and a rise in revenues for various businesses. In times of Social Distancing and a shutdown of physical services, the digital markets may prove to be game-changers in the near future. Offering products online and promoting through digital marketing will be at the forefront. The quarantine time must be utilized in order to improve existing products and increase the customer base of companies. Byju's, India's famous online learning platform is leading by example in this front by offering its application essentials and courses for free. This will help them expand their brand in the coming years and create a customer base. Cult Fit, a Bangalore based fitness startup has used technology to create an application helping fitness freaks to workout from home. ONEPLUS, the Chinese Smartphone brand launched its new flagship, the ONEPLUS 8 in an online event, and created a filter to let smartphone lovers do a virtual unboxing of the device as getting the device physically is not possible at the moment due to restrictions. Decathlon, America's leading sports and fitness equipment brand started an online campaign, "We're in this Together" and the hashtag "#PlayItSafe" to appeal to their customers and increase sales of their home workout equipment. These examples show how brands and organizations have realized the importance of this lockdown to expand their base and consolidate their position in the market as they battle out the crisis.

The COVID-19 pandemic has led to chaos and panic throughout the working world. But there are huge opportunities for companies to expand and improve in the future. All organizations need to have a designed plan in place to ensure smooth functioning once the lockdown is lifted. Social distancing and hygiene will become key for manufacturing industries. The Travel industry which is currently in its worst state will need to recover fast in order to ensure the safe movement of passengers once borders are reopened across the world. The Service sector will need to move to digital platforms and hype digital marketing. Artificial intelligence will play a key role with a reduction in workforce eminent due to lack of demand. Handling tasks with the help of AI and reducing the need for an employee will improve cost-effectiveness until revenues rise back to normal. E-Learning has evolved ov

er the past few years and its importance has been realized over this quarantine period. All major colleges and schools have transformed into an online program in order to educate students. This change is likely to be carried forward with more and more Educational Institutes switching platforms. E-commerce has also been an integral part of the world and will become even more important in the coming days. As malls and markets are shut and are expected to remain shut, e-commerce websites will benefit from the same. It is also an opportunity for retailers and vendors to create their base online or sell through e-retailers in order to generate revenue. Small vendors and retailers will continue to be an important part of the supply of the essential good to households and improving sanitation in these places will be key. MNCs that have switched to the atmosphere of "Work from Home" will find it easier to connect large groups of people together at all times and ensure all employees contribute to the smooth functioning of the companies in the crucial days up ahead. Entrepreneurial minds will also be encouraged to put forth their idea and create a startup of their own to make the corporate world an improved space in the future.

The world is in a state of panic and it is important for all of us to be united in this fight against COVID-19. As employees continue to work from home and make study rooms their cabins, organizations need to adapt to this new style of working and realize its importance for the coming months until a solution is found for this problem. Internet and online services will play an important role in the future. This transition will lead to a better "Digital World" and improve accessibility throughout the globe.

STAY SAFE, STAY TOGETHER AND DEVELOP YOUR COMPANY FURTHER!

Blackcoffer Insights 17:-Shaurya Srivastava, Delhi College of Arts and Commerce, Delhi University

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By Ajay Bidyarth - April 30, 2020 6356

Bill Gates in his TedX address in 2015 pointed out to the predicament of world leaders who failed to invest sufficiently into health infrastructure and he further elaborated on the inability of the prevailing health facilities to accommodate the next pandemic the world would face.

The whole world is grappling with COVID-19- the virus that took birth in the city of Wuhan and spread across the globe, claiming more than half a hundred thousand lives and affecting more than two million people.

With the fear of the virus spreading, the whole world entered into a complete and stringent lockdown mandated by the national governments. This caused economic activities worldwide to come to a standstill except for sectors that provisioned essential goods and services. The international agency-IMF has projected that the global output will contract by 3% in 2020 which is even worse than the 2008-09 financial crises. Moody downgraded the global growth forecast to 2.5% in 2020 from an earlier estimate of 5.3%. The US economy is expected to contract by 2%, Euro-era by 2.2% and China is expected to grow at 3.3% rather than an earlier estimate of 6% in 2021. The national governments have been presented with inevitable challenges of ensuring sustenance and livelihood to masses, improving investor confidence and preventing the economies from falling into a recession in the absence of consumerism amidst the uncertainty about the longevity and future intensity of the pandemic.

The GOI took the decision to enter into lockdown in the preliminary phase of the spread of the virus. The Indian economy in the fiscal year 2019 was already hit by severe NPA crises. It witnessed a downward spiral and grew at a mere rate of 5% as against 6.8 % in 2018 as per the statistics released by the NSO-National Statistical Organization. The manufacturing and construction sectors were negative outliers. The government in order to recuperate announced a plethora of decisions. The government cut the corporate tax from 30% to 22% and for manufacturing enterprises from 25% to 15%. In order to strengthen the position of public sector banks, the government announced the merger of 10 public sector banks into 4

The government also announced a fiscal stimulus of 1.7 lakh crores INR stepping over its fiscal deficit target in order to drive the economy out of the downward spiral and get it on the path of growth, giving lubricant to an economy facing liquidity crunch with heightening NPA.

But the Coronavirus outbreak halted the economic activity and posed government the issue of fulfilling the basic survival needs of workers in the informal sector in the wake of massive urbanization. The daily wage earners tried to walk down to their native places in huge numbers posing immense difficulty for the government. Apart from that the domestic equity market indices- the BSE Sensex and NSE Nifty crashed which reflected the erosion of investor confidence and reflected stealth of bearish sentiment around the world.

All this amalgamated together posed a serious question on the survival of a huge chunk of the Indian population and invited a lot of criticism for the government.

This is when the Central NDA government announced a fiscal relief package: The Central government announced a fiscal stimulus of additional INR 1.7 Lakh Crores that constitutes approximately 0.8% of India's GDP under Pradhan Mantri Gareeb Kalyan Yojna. This fiscal stimulus is used to target the underprivileged section of the society instead of conventional indirectly lubricating the economy through deficit financing.

The government under the NFSA-National Food Security Act has decided to provide an additional 5 kg of Indian staple wheat and rice and 1 kg of pulses every month to people with ration cards. The government is expanding and accelerating the dissemination of unilateral transfers under various government schemes. Under PM Kisan Scheme an Indian farmer receives payment of INR 6000 in three installments every year. Out of 6000 the GOI had disbursed INR 2000 immediately. The government has made a provision of providing 2 installments INR 1000 for the next three months those already availing old ages, women, or disability pension. The women who are Jan Dhan account holders are to receive INR 500 for the next three months. The government assured the availability of cooking gas by providing 1 LPG cylinder for the next three months to 8.3 crores people covered under Ujjwal Yojna. The government in order to prevent the deterioration of and encourage entrepreneurial spirit in already discriminate rural women the government made a provision for Women SHG's where they can receive collateral-free loans up to INR 20 Lakhs under NRML (National Rural Livelihood Mission). The government also enhanced payment under MGNREGA from INR 180/day to INR 202/day.

The government has also taken upon itself to provide for the EPF contributions of 12% each of the basic salaries of both employees and employers for the next three months. In order to ensure household liquidity the employees can withdraw from their EPF accounts balance up to 75%. The GOI is also providing insurance coverage of INR 50 lakh for a tenure of 3 months for about 22 lakh health workers in government hospitals inclusive of ASHA workers, medical, sanitary workers, and paramedics.

The finance minister Nirmala Sitharaman also pointed out that increased money supply combined with the dollar swap with the USA will help curb the inflammatory effect also.

Shaktikanta Das, the RBI chief announced a monetary relief package for the economy that seemed to regain investor confidence as the national stock indices rallied. The following are the elements of the package:

The repo rate is the rate at which the commercial banks can avail loans from RBI. The RBI cut Repo Rate by 75 basis points from 5.15% to 4.4%. This reduction in the cost of borrowing from RBI gives commercial banks an incentive to enjoy increased margins by borrowing at a relatively lower rate than past and investing at the same rate i.e. by granting loans to businesses and households. Cut in Reverse-Repo Rate by 25 basis points from 4% to 3.5%. The reverse repo rate is the rate at which banks can park their funds with the RBI. This primarily implies the reduction in the interest rate the banks can earn by parking their funds with the RBI. This incentivizes them to lend. But given the commercial bank's acquaintance with the friction caused by erosion of consumerism due to fear of COVID-19; it is hard to forecast how successful the aforementioned steps are.

The RBI also announced a moratorium or a provision to defer payments of EMI's on home, car, and credit card dues for a period of 3 months from 1st March-31st May. The government also provided for interest-free loans for the MSME sector to meet their working capital requirements after the lockdown has been uplifted. The RBI also announced a refinancing window for INR 50,000 crores for financial institutions like Nabard, National Housing Bank, and Sidbi.

As the markets crashed the foreign institutional investors withdrew their investments from the Indian Market, increasing the demand for USD and increasing the supply of INR causing the rupee to depreciate. The currency hit the bottom low of INR 76/ USD. To prevent further erosion in the value of rupee the RBI entered into a 6-month swap agreement with the US government. The deliberation to undertake a currency swap began when as a result of panic-selling the foreign exchange reserves fell around \$7.5 billion in two weeks to \$439.66 billion on March 27.

Despite tourism, hospitality, domestic trade, airline industry taking a hit, India was presented with quite a few opportunities as well.

India came as a messiah to export hydroxychloroquine to the USA, followed by Indian pharmacy companies- Lupin, Dr. Reddy's Laboratories, Strides Pharma's plants in India, and Biocon's plant in Malaysia being given clearance by US FDA-US Food and Drug administration. This gives massive export opportunities to these entities, improving their growth prospectus. The crash of crude oil prices caused by falling out of negotiations between OPEC and Russia creating supply pressure along with lowered demand enabled India to lower its import bill. According to a report by ICRA every \$10 decline in crude oil price saved India \$15 billion.

Not only India but countries like the USA, Japan, UK, and Germany have announced massive fiscal stimulus packages to equip their economies to come out of this phase of decelerating economic activity.

US announced a fiscal package of \$2 trillion with is approximately 9.3% of its GDP. This relief package is the largest relative to the GDP is the largest of the kind in the Modern American History. It is way larger than \$800 billion assistance provided in 2008. Germany introduced largest fiscal stimulus in relation to GDP.

The following graph indicates the fiscal stimulus as a proportion of GDP of respective countries

Workers in the US whose annual incomes are up to \$75000 will receive \$1200 in direct payments as well as \$500 for every offspring. America being America came to the rescue of businesses by allocating \$500 billion to businesses and local government bodies.

It announced various sectorial packages-\$50 billion for passenger airlines, \$8 billion for cargo carriers, \$17 billion for businesses involved in maintaining national security. Taking care of the small industry sector, the US government committed itself to devote \$350 billion to the working capital requirements of these entities. The government further allocated \$150 billion for the health care sector, \$45 billion for the disaster relief fund, \$31 billion for the education sector, \$27 billion for research and development, and \$15.5 billion towards the food stamp program.

. Republican President Donald Trump has been under a lot of criticism lately. The tackling of the COVID-19 crisis by America could either relinquish Trump administration or them another tenure. But so far the situation seems critical with the USA registered with the maximum number of cases

China- the epicenter of the pandemic has been facing a lot of backlash from world powers like the USA, UK, France, and Germany; each country asking for monetary compensation. The US even alleged that China has conducted low-frequency nuclear tests while the whole world is anguished. China has also been frowned upon for acquiring a stake in various companies like-The PBOC enhancing its claim in HDFC to 1% and many other entities amidst panic selling. China also capitalized on low crude oil prices by creating massive buffers. It further exported PPE to various countries, capitalizing on the minutest of opportunities available.

This is the time to be prudent and try to remain optimistic as is illuminated by Charlie Munger,-"I would .....when the worst typhoon that's ever happened comes. We just want to get through typhoon and we'd rather come out it with a whole lot of liquidity. ..."

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COVID19 affects the world from every way life emotional to social, philosophy to physical. Economical to the th read of life..it is known as present as part of life. which tell as on a daily base to the world just stop your self where you are present..if you move you will lose to yourself and to others, it's like a story which tells which we listen in our childhood one dirty fish harm the all see.

So now we have one only options to not move which tell as that we can't work as we working 3months earlier...til l the hope of living make new invention to challenge the world biggest challenge..upto that time we have stop to as to work as we are working eailer that mean we have to do essential work...this self defince throory and sanjvi ni of life is going to affect world of work as i mantion in many why before we understand current sanrio..i wold like to share some personal life experiences with you i belong to small beautiful city it far from 250 km from india capital new Delhi...story of today my city is not that mctah complex as big metro city or world most develo ped nations are facings problem of covid but still we are at self isolated face as city ti safe as here the pro blem which tell as beautiful stories 4week earlier when there no lock down was there our maid came to work at h ome and my mom asked here to stop working she repided very beautiful that if we stop working who will going to take care of my family. here directly saying moany is one thing at that time but may mon replied here that we w ill help you and I also replied here that government will also help if their situation will be critical but she reply again and told me that what use of here good health that if we can't use to for work and she continues to come on work till 2day of 1st lockdown. She stops till when law forced here to stop here...my mom asked here yest erday when she comes to our medical shop to take medicine for her family. What you are doing know days she repl ied again in a beautiful way and told us that she said I going into gurdwara to for making food for a needed pe rson with taking some sought of privation I asked why you are doing she replied that I am financial strong so t hat I can help other but I can do which I can do is work for other...this story give many views regarding the cur rent working scenario. even I was thinking earlier we are going fave of life where we going to so lazy and more addicted of device yes we going to attend of these things but as our DNA and value system and living force to e arn money for living or living for money is going to work as past this story till me that we going to past as f uture today is just phase which will pass out one day with some spreading difficulty and learning of life that give a clear picture that we not going to time world work stop in future and if we talk about the current scena rio we still not our critical work yes we have to stop or we many cases we stop using unnecessary think. let di scuss the current world work situation with some facts and figures....In the worst-case scenario, the world econ omy could contract by 0.9 percent in 2020," the DESA said, adding that the world economy had contracted by 1.7 percent during the global financial crisis in 2009. this will result in a massive increase in the unemployment rate even some figure start to come regarding jobless like:

America till know project that they are going to be 2 crore jobless due to covid19 if this will continue till 3 moth more, see face developing nation when the name of doping nation come to the first ma,e come into mind is I ndia

with reference of business stand article;

we estimated the cost of lockdown nearly 17.008 lakh crore or rupee 17 trillion dollar loss to a different sect or of business if strictly lockdown is followed till 17 may let's see sector ways...

the mining sector is going to affect completely with the loss of 0.6975 lakh crore rupees only and manufacturin g sector going face loss of 4.86 lakh crore only, construction cooling shut down for 2.385 lakh crore loss, tra de hotel transport business and broadcasting facing loss 5.445 lakh crore, financial real estate are going fac e loss of 6.3225 lakh crore which make total 17 lakh crore loss

this finger is eagle to the total focal budget of the movement of India of 2015 and India estimate COVID 19 cos ts the 3 crore people jobless in India so imagine where we are going but still, we have hope to get well soon b ecause we know when to work or when to stop us. My last opinion state work of word today affected but after som e time we will at the same path where we in the past it just need some afford.

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By Ajay Bidyarthi - May 1, 2020 6428

"The more you know about the past, the better prepared you are for the future."

Theodore Roosevelt

As we speak, the world finds itself engulfed in one of its worst crises in recent times. The global COVID-19 pandemic has caused never-seen-before disruption in both public and economic life. Not only have factories shut down or supply chains abruptly stopped or millions of workers stranded, but festivals suspended, families separated across countries and public-healthcare systems put under tremendous stress. Such a scenario is a first-time for many, but the world has been through pandemics of a similar scale and nature before, and after the due struggle, emerged victoriously. As the more experienced amongst us would remember, the SARS and MERS outbreaks in the early 2000s presented a similar scenario, although at a much lower rate of infection, yet with higher rates of morbidity. Going back further in time, the 1918 Spanish Flu brought a world just out of the first world war, to a standstill. Considered to be the worst amongst modern-era pandemics, the Influenza pandemic affected one-third of the world's population and 50 million lives. Yet, preventive measures such as social-distancing, quarantine, mass-vaccinations, public support, and restraint have proved to be successful in all such situations, even being effective in occasional plague outbreaks across the world. We face a similar situation today – an extremely infectious virus, which has already spread globally, confined people to their homes and is causing tremendous economic loss every minute economic activity remains suspended, affecting both the government and the industries alike.

Can past similar incidents guide industries in such trying times? Can our governments take note of how public-policy measures adopted during the Spanish flu, SARS and MERS outbreak helped in eliminating such pandemics? What can the Government learn?

The panic due to the outbreak of COVID-19, and more importantly, the lockdown measures to deal with it, are quite similar to those during the 1918 Influenza Pandemic, or as it is more commonly referred to as, the Spanish Flu. Large cities around the world were put under strict lockdowns, and businesses worldwide came to a grinding halt as large chunks of the population became bedridden.

The immediate consequences were the same as the ones observed in the past few weeks – rampant unemployment, supply shortages, and heavy reliance on social security systems, causing a sudden strain on national economic resources.

#### Impact & Learnings

##### Information & Censorship

Effective and transparent communications are one of the most crucial and useful tools in disease control. Iran presents a great example of the damage that can be unleashed by a media-blackout. Secondly, censorship might not be the best way to appease the masses during such times. The long-term political impact of media censorship and manipulation of epidemic-related facts in China is yet to be seen. Still, the short-term international unrest and dissent have only deteriorated international relations. At the risk of quoting a cliché as well as the established Streisand effect, the truth always comes out, no matter how many countries try to hide it.

##### Isolation, Lockdown & Distancing Mechanisms Work

The Spanish Flu spread was aggravated due to the failure of policymakers in adopting effective containment measures. Research shows that US cities which undertook measures to reduce contact amongst citizens in early-1918 displayed significantly lower peak death rates compared to cities that failed to or were too late to adopt disease containment policies.

To quote the results from this 2007 study, "Consistent with this hypothesis, cities in which multiple interventions were implemented at an early phase of the epidemic had peak death rates ~50% lower than those that did not and had less-steep epidemic curves. They also displayed lower cumulative mortality."

1: Contrasting the Death Rates in Philadelphia v. St. Louis during the 1918 Influenza Outbreak

1: Contrasting the Death Rates in Philadelphia v. St. Louis during the 1918 Influenza Outbreak

As one might guess, Philadelphia was late to levy restrictions on gatherings, parades, and social distancing measures, whereas St. Louis was not.

From the same study, we see the definition of a popular phrase "flattening the curve" emerging – which is spreading out the rate of infection over time, enabling health care systems to treat people in a staggered manner, in line with available resources. And, to further corroborate this result, the following graph from the same study shows the different trajectories followed by the disease in two cities of the US.

Hence, regardless of the multiple debunking claims of social-distancing & lockdown as an effective preventive mechanism, previous epidemics have taught us that they perform a marvelous job at 'flattening the curve'.

Premature Relaxation can be Disastrous

Social Distancing & Lockdown measures are effective, only if sustained, at least for a few months, even after things start to improve.

Markel (2007), shows the disastrous consequences that the early relaxation of bans on public gatherings in St. Louis had on death rates, during the Spanish flu. The pullback of social distancing measures to pursue economic interests was premature and caused a sudden, unprecedented surge in the number of deaths due to the flu.

2: Deaths due to the Spanish Flu in St. Louis – A Wider Picture. The black & grey lines show the duration for

which social-distancing measures were active.

2: Deaths due to the Spanish Flu in St. Louis – A Wider Picture. The black & grey lines show the duration for which social-distancing measures were active.

Another peak in death rates was observed only in cities that had relaxed distancing measures prematurely. Hence, it is crucial to consider this past artifact when governments compare the inconveniences to the public & damage caused to the economy due to such measures, with the benefits to the nation in terms of human life saved, and then make the call as to when the restrictions must be eased.

What can the industry learn?

The industry has played a key role in the obscure fight against the worldwide outbreak. But it faces its fair share of challenges, in such unprecedented times.

Supply Shortages, due to shut-down of factories & production houses and the uncertainty of when production systems would resume to normal functioning. Transport disruptions, due to closure & quarantining of cities and state borders; nation-wide lockdowns bringing all transportation to a standstill; significant disruptions in the supply-chains of most goods. Labour issues, with restrictions on movement, come issues of labour welfare, unrest and employment security. This problem is even more serious if the labour force is migratory in nature.

Global industries have weathered through multiple natural disasters and two epidemics of a similar scale and nature. Their recovery-paths have immense strategic implications for current policy-makers and offer strategic insights, helping companies chart out their short-term & long-term strategies.

3: This graph looks at the retail sales impact of the SARS epidemic in China in 2003; the earthquake, tsunami and Fukushima nuclear disaster in Japan in 2011; and the MERS epidemic in South Korea in 2015

3: This graph looks at the retail sales impact of the SARS epidemic in China in 2003; the earthquake, tsunami and Fukushima nuclear disaster in Japan in 2011; and the MERS epidemic in South Korea in 2015

Three phases characterise the impact on the retail market in all these three cases:

ShockRecoveryStabilization

The paths inevitably converge to stabilization but follow different trajectories, and are swayed by public perceptions and externalities, as in the case of the mid-autumn festival in South Korea. Looking at the retail sector or from a micro-lens, past crises show that demand trends vary amongst product categories, both during and post the crisis. The three categories usually follow such trends:

Demand Trends during & post a Pandemic-generated Crisis

4: Demand Trends during & post a Pandemic-generated Crisis

4: Demand Trends during & post a Pandemic-generated Crisis[1]

These three trends are a valuable tool for both large scale players and regional retailers who now have the means to prioritize and predict consumer-demand and consequently alleviate a sudden strain on the product supply chain arising out of sudden & unexpected demands.

Change in Consumer Behaviour

A peculiar outcome of such epidemics have been the somewhat permanent changes instilled in consumer buying trends across the inflicted regions, across product categories – Fresh staples see a sharp rise in their demand and product hygiene & safety standards are ranked higher up in the consumers' priority list. Hence, the advantage lies with producers who can quickly integrate changed consumer-preferences in their products, showcase product reliability & quality, and priced competitively, given the prevalent context. Lastly, previous pandemics have consolidated a long-standing theory, which is true not just for the retail sector but for any consumer-centric industry that there is, – Consumer Loyalty is tried and tested during these times. Effective Consumer Relationship Management (CRM) can forge bonds that go a long way, weathering through the thick and thin in such unprecedeted times.

Implications

Almost two decades ago, the SARS outbreak in China had pushed entrepreneurs and established players to embrace the dawn of the e-commerce era. This outbreak is expected to accelerate further the shift from conventional brick-mortar based commerce to a centralized online cloud-store based mechanism. Survival, in the FMCG sector at least, will be decided to a great extent by the breadth of the supply chain networks and the ability to overcome severe bottlenecks.

The past has shown that even though established large-scale players with deep pockets and extensive networks, have a likelier chance to tough it through these hard times, even the regional players & SMEs make it through, strengthened by community-support, empathy and most importantly, local relationships.

What did we fail to learn?

This global pandemic outbreak has made one thing painfully clear – there is a lack of global collaborative research on ways to combat the spread of such infectious diseases. In the words of Johan Neyts, professor of virology and president of the Belgian-based, International Society for Antiviral Research (ISAR), health authorities failed to incorporate the learnings of the SARS outbreak of the early 2000s, partly because of the economic crisis of 2008 which squeezed funds from any potential research that could have been undertaken and partly because of the lack of seriousness in authorities in considering the efforts involved in dealing with the future expected breaks of coronavirus due to its seven different strains in existence.

The Way forward?

All of these lessons come with a caveat – Things change with time. The modes of communication have changed. Both information & travel is much more accessible now. We have fast planes & faster internet. We have better healthcare capabilities and a much better, if not perfect, healthcare system. In 1918, people didn't even know that a virus was causing the pandemic until much after its eradication. Today, we already have extensive research going on for 70 different probable vaccines for the virus, with a record setting pace in clinical trials and approvals.

We are much better equipped than what we were 100 years ago, and at the same time, somewhat under-equipped to deal with it. But these lessons from the various similar crises that humanity has faced and risen from, act as a glimmer of hope in these dire times, and if put to good use, can aid in the fight against COVID-19. In the words of Howard Markel, "There's never been a better time in human history to have a pandemic than today, with the exception of next week or a month later. You want to kick that can down the road, but it's here today."

Blackcoffer Insights 17: Nishant Kumar Satyam, Vasu Golyan

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By Ajay Bidyarth - May 1, 2020 5924

The current topic that is burning the world alive is the deadly coronavirus. Let us first understand what this coronavirus actually is. According to the World Health Organization (WHO), the Coronavirus disease which is called the COVID-19 is an infectious disease which is caused by the newly discovered Coronavirus. The COVID-19 virus is a virus that affects different people of the world in different ways. The COVID-19 disease is a respiratory disease and most of the infected people will develop mild to moderate symptoms and recover without even requiring special treatment. The people who already have underlying medical conditions and those people who are over 60 years old have a higher risk of developing severe disease and death.

Common symptoms include:

fever tiredness dry cough.

Other symptoms include:

shortness of breath aches and pains sore throat and very few people in the world will report diarrhea, nausea, or a runny nose.

The people living in this world who have only mild symptoms of this deadly disease but are otherwise healthy should self-isolate and contact their medical provider or a COVID-19 information line for advice on testing and referral. The people who have a fever, cough, or difficulty breathing should call their doctor and seek medical attention.

Some key lessons from the deadly disease Coronavirus: In the last 3 months, there has been a drastic change to human life all around the world. The coronavirus outbreak happening in the world is no more just an epidemic but it is also considered as a global pandemic now. The people everywhere in the world are being asked to stay home and stay away from other people so as to reduce the risk of infection.

The deadly disease Coronavirus has brought with it a wave of negative outcomes, terrible illness, and death, but at the same time it has also highlighted some important life lessons. Some of them are as follows:

1. You should be willing to trade some of your freedom for the greater good of the public: There is no doubt for anyone that it has been difficult for everyone in the world to stay at home. Many people complaining about feeling bored and aimless. Some people may even have the feeling that it is a breach of their individual rights, being made to stay home. However, when it comes to the greater good, one should always be willing to sacrifice a little bit of that freedom. A balance between individual rights and public safety is an ever-changing thing. Trade a little bit of your freedom for the greater good of the public.

2. You should wash your hands, whether there's a virus or not: General hygiene is always important. Not just when there is a virus. You should know the drill by now. Wet your hands. Lather them with soap. Scrub for 20 seconds. Rinse off. Dry with a clean towel. Washing hands on a regular basis are really the best way to keep safe because soap is a very effective way to kill viruses.

3. Working from home should be an option for many: In this time of the global outbreak of the Coronavirus disease, many people have learned that their jobs were possible to do from home. Most jobs have a certain amount of work that can be done remotely. Without the virus in place, there should still be some system in place that will promote work-life balance.

4. Taking that sick day from the work could save lives: If you are feeling sick at any day in this situation, it is highly beneficial that you just stay home. It is a common feeling among lots of people that their office environment does not encourage taking sick days. Many people want to appear like martyrs to their managers. This mentality needs to stop. If you are sick, just stay home.

5. The Internet should be a basic right: According to a study done by the University of Birmingham, the right to Internet access, also known as the right to broadband, should be considered a human right. Many people from all over the world are unable to get online, particularly the people who live in developing countries, and so they lack meaningful ways to influence the global players shaping their everyday lives. In addition to this, during times like these, it is especially important to be able to contact family, friends, and work from home if necessary. The Internet is the only way to do so.

6. The doctors and the researchers need to be paid better: If this scary time has taught us anything, it's that doctors and researchers will be the ones who get us out of this mess. The doctors and the researchers are the only ones who are working day and night to drive the recovery of the world. At the moment, hundreds of scientists scramble to find a coronavirus treatment. It is high time for us that we need to re-evaluate how much money Hollywood actors, pro-athletes, and politicians make and instead pay the scientist and the doctors the salary they deserve.

7. Everyone should know how to cook: The situation that has forced everyone to stay at home has forced many people to learn, re-learn, or re-ignite their love for cooking. Learning how to cook is to have one of the most important skills in life. You depend on yourself. It teaches you self-sustainability and you save a lot of money. These days, hundreds of people sharing social media posts of their delicious meals. They are re-discovering the wonders of eating in.

8. The importance of talking to friends every day: Now that we can't go out and keep busy, the best way to combat loneliness is to be in regular contact with friends and family, by chatting over the phone or video chatting. This is the time to have long talks and deep conversations. Don't forget human connection during these crucial times. Call your grandma!

9. Learn to appreciate nature: If you live near a spacious outdoor area, like the desert or an empty road lined with trees and you realize it is the only safe, surface-less space to take a walk in, then you start to realize how beautiful nature actually is. The point is not to remain indoors, but to avoid being in close contact with others. When you do leave your home, whether it is for a walk in the desert or a run on your street, make sure to wipe down any surfaces with which you come into contact and at the same time also avoid touching your face and frequently wash your hands.

10. Learn how to be content alone: It is so hard for some people to just be still and do nothing. Being alone, especially for extroverts can be exhausting and lonely. Social distancing can be very difficult, but it can also teach you a lot about yourself. You learn how to keep yourself busy. Your body and mind is your home and you have to learn how to love it and live with it.

Conclusion: It is rightly said that it is important to learn from the past. The deadly Coronavirus disease that is taking the lives of so many people across the world, has taught so many life lessons to the people living in it. These lessons are not meant to be forgotten but are to be remembered by human beings in order to make the Earth a beautiful place to live in. Lastly, I would like to conclude by mentioning that "Stay at Home. Stay Safe. Save Lives".

Blackcoffer Insights 17: Snehasish Ghosh, Darrang College Assam

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By Ajay Bidyarth - May 1, 2020 6365

Coronavirus, now globally carrying the status of a pandemic, has led to a worldwide crisis with its effects on the hospitality industry potentially heavier than those of 9/11, SARS, and the financial crisis in 2008. Know how Coronavirus Impact the Hospitality Industry

This time, however, the hospitality industry has never experienced and sudden downturn. Putting the human at the Centre of the situation, the virus generates fear and impacts us in a deeply emotional way that this generation has never felt.

Covid-19 has made a massive impact in the world tourism and hospitality sector. The industry is passing through an unforeseen & unprecedented crisis. This has led to a socio-economic domino effect with a significant impact on the global tourism and hospitality industry. Thus Coronavirus Impact on the Hospitality Industry.

96% of all global destinations have imposed travel bans or restrictions by Jan 2020. The tourism & Hospitality Industry is one of the service industries which can help you enrich, enlighten & provide self-satisfaction. The industry contributes 10.3% of Global GDP which means providing 1 in 10 jobs in the world (2019 Statistics) and 9.2% of India's GDP providing 1 in 4 new jobs in India (Indian Statistics,2018). With global industry growth, 3.5% potentially providing 330 million jobs besides a significant source of foreign exchange is now standstill with unparalleled and unforeseen impact

United Nations World Tourism Organisations states that "Any assessment of the impact of this unparalleled crisis on the tourism sector is quickly surpassed by the fast-changing reality. Considering the unparalleled and fast-evolving nature of the crisis, it is extremely challenging to estimate the impact of COVID-19 on international tourism".

With the numbers rising every week, approximately 75 million jobs are affected. This is also impacting local products and vulnerable communities whose survivals depend on the incoming of more and more tourists.

Spreading the impact, almost all tourism allied industries and jobs are suffering. Because, tourism has always had a history of continued growth and resilience.

Blackcoffer Insights 17: Sukriti Shalini, ICFAI Business School, Bengaluru.

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By Ajay Bidyarth - April 12, 2020 8798

India has been beset by financial scams since Independence. Every 4-5 years, Indian citizens hear about so many trillions of public money being misappropriated and eventually lost by people who the public is supposed to start. In this article, with examples, I would like to point out that there are two factors to scams like Nirav Modi: the complicity of actors within the financial industry and the systemic loopholes in an emerging financial system that has been used for scams like Nirav Modi.

The first financial scam of Independent India was found in 1958 when Feroze Gandhi, MP found that In 1957, Hari das Mundhra got the government-owned Life Insurance Corporation (LIC) to invest Rs. 12.4 million (about US\$3.2 million at the time) in the shares of six troubled companies of whom Mundhra held a large number of shares which he was trying to boost by rigging the market. The investment was done under governmental pressure and bypassed the LIC's investment committee, which was informed of this decision only after the deal had gone through. In the event, LIC lost most of the money. Several leading stockbrokers who were on the LIC Investment Committee testified that the investment could not have been made for the purpose of propping up the market, as was claimed by the Finance Ministry, and that had the LIC consulted the Investment Committee, they would have pointed out Mundhra's forged shares episode from 1956. The Finance Minister T. T. Krishnamachari, in his testimony, tried to distance himself from the LIC decision, implying that it may have been taken by the Finance Secretary, but Justice M.C. Chagla held that the Minister is constitutionally responsible for the action taken by his secretary and he disowns his actions. Eventually, Krishnamachari had to resign. The Nehru government suffered considerable loss of prestige in the incident.

The 1992 Indian stock market scam was a stock market scam orchestrated by Harshad Mehta. The scam took place in Mumbai and was the biggest market scam of India. The 1992 scam was a systematic stock fraud using bank receipts and stamp paper which caused the Indian Stock market to crash. The scam led to a complete structural change of the security system of India and introduced a completely new system of stock transactions. The 1992 scam exposed the Indian financial systems through the inherent loopholes of the system. This scam led to the reform of the security system of India and introduced online security systems. The scam was orchestrated in such a way that Mehta secured securities from the State Bank of India against forged cheques signed by corrupt officials and failed to deliver the securities. Mehta made the prices of the stocks soar high through fictitious practices and would go on to sell the stocks that he owned in these companies. The 1992 scam raises many questions which involved many bank officials responsible for collusion with Mehta. The 1992 scam caused an investigation through which many officials were implicated in fraudulent charges. The security system of India took a rapid reform in its fundamental structure post the 1992 scam. The first major structural change was the formation of the National Stock Exchange of India (NSE). The first major reform in the financial sector of India was the formation of the CII Code for Desirable Corporate Governance developed by Rahul Bajaj. Post-1992, a new regulatory board known as the Securities and Exchange Board of India was formed to monitor the National Stock Exchange and the National Securities Depository. There were structural changes in the equity market. The government introduced ten acts of parliament and one constitutional amendment based upon the principles of economic reform and legislative change for the equity market. The NSE introduced online trading in 1994 which changed the dynamics of stock buying and selling. The capital market now opened up nationally as opposed to being confined in Mumbai. The exchange system started functioning based on satellite communications that abolished geographical barriers.

In 2001, Ketan Parekh purchased large stakes in less known small market capitalization companies and jacked up their prices through circular trading with other traders, and collusion with these companies and large institutional investors. This resulted in steep hikes in share prices. It later transpired that promoters and industrialists often gave Parekh funds to artificially rig up their share prices. This set of ten stocks was colloquially referred to as "K-10" stocks and Parekh was playfully referred to as "Pentafour". The RBI commenced an investigation against Parekh. Around the same time, a bear cartel of brokers in Mumbai opposed to Parekh tried to dump their shares of K-10 stocks. Panicking, Parekh sold off his entire ownership of the so-called K-10 stocks that he had successfully jacked up over the past two years. This resulted in a stock market crash the next day, resulting in large-scale losses for large institutional investors, including insurance companies and mutual funds. A 30 member Joint Parliamentary Committee (JPC) investigation ensued which found that Parekh had been involved in circular trading throughout the time period from and with a variety of companies.

When the Securities Exchange Board of India (SEBI) started scanning an entire spectrum of IPOs launched over 2003, 2004, and 2005, it ended digging up more dirt and probably prevented a larger conspiracy to hijack the market. It involved the manipulation of the primary market-read initial public offers (IPOs)-by financiers and market players by using fictitious or benami Demat accounts. They then transferred the shares to financiers, who sold on the first day of listing, making windfall gains from the price difference between the IPO price and the listing price. This time, fraudsters targeted the primary market to make a quick buck at the expense of the gullible small investors. Direct Participants (DPs) used retail applicants' shares for reaping benefits in the stock market.

The 2010 fake housing loan in India was uncovered by the Central Bureau of Investigation (CBI) in India. CBI ar-

rested eight top-ranking officials of public sector banks and financial institutions, including the LIC Housing Finance CEO Ramchandran Nair, in connection with the scam. CBI alleged that the officers of various public sector banks and financial institutions received bribes from a private financial services company, which acted as a mediator for corporate loans and other facilities from financial institutions. The bank officials sanctioned large-scale corporate loans to realty developers, overriding mandatory conditions for such approvals along with other irregularities.

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By Ajay Bidyarth - April 12, 2020 8798

India has been beset by financial scams since Independence. Every 4-5 years, Indian citizens hear about so many trillions of public money being misappropriated and eventually lost by people who the public is supposed to start. In this article, with examples, I would like to point out that there are two factors to scams like Nirav Modi: the complicity of actors within the financial industry and the systemic loopholes in an emerging financial system that has been used for scams like Nirav Modi.

The first financial scam of Independent India was found in 1958 when Feroze Gandhi, MP found that In 1957, Hari das Mundhra got the government-owned Life Insurance Corporation (LIC) to invest Rs. 12.4 million (about US\$3.2 million at the time) in the shares of six troubled companies of whom Mundhra held a large number of shares which he was trying to boost by rigging the market. The investment was done under governmental pressure and bypassed the LIC's investment committee, which was informed of this decision only after the deal had gone through. In the event, LIC lost most of the money. Several leading stockbrokers who were on the LIC Investment Committee testified that the investment could not have been made for the purpose of propping up the market, as was claimed by the Finance Ministry, and that had the LIC consulted the Investment Committee, they would have pointed out Mundhra's forged shares episode from 1956. The Finance Minister T. T. Krishnamachari, in his testimony, tried to distance himself from the LIC decision, implying that it may have been taken by the Finance Secretary, but Justice M.C. Chagla held that the Minister is constitutionally responsible for the action taken by his secretary and he disowns his actions. Eventually, Krishnamachari had to resign. The Nehru government suffered considerable loss of prestige in the incident.

The 1992 Indian stock market scam was a stock market scam orchestrated by Harshad Mehta. The scam took place in Mumbai and was the biggest market scam of India. The 1992 scam was a systematic stock fraud using bank receipts and stamp paper which caused the Indian Stock market to crash. The scam led to a complete structural change of the security system of India and introduced a completely new system of stock transactions. The 1992 scam exposed the Indian financial systems through the inherent loopholes of the system. This scam led to the reform of the security system of India and introduced online security systems. The scam was orchestrated in such a way that Mehta secured securities from the State Bank of India against forged cheques signed by corrupt officials and failed to deliver the securities. Mehta made the prices of the stocks soar high through fictitious practices and would go on to sell the stocks that he owned in these companies. The 1992 scam raises many questions which involved many bank officials responsible for collusion with Mehta. The 1992 scam caused an investigation through which many officials were implicated in fraudulent charges. The security system of India took a rapid reform in its fundamental structure post the 1992 scam. The first major structural change was the formation of the National Stock Exchange of India (NSE). The first major reform in the financial sector of India was the formation of the CII Code for Desirable Corporate Governance developed by Rahul Bajaj. Post-1992, a new regulatory board known as the Securities and Exchange Board of India was formed to monitor the National Stock Exchange and the National Securities Depository. There were structural changes in the equity market. The government introduced ten acts of parliament and one constitutional amendment based upon the principles of economic reform and legislative change for the equity market. The NSE introduced online trading in 1994 which changed the dynamics of stock buying and selling. The capital market now opened up nationally as opposed to being confined in Mumbai. The exchange s

ystem started functioning based on satellite communications that abolished geographical barriers.

In 2001, Ketan Parekh purchased large stakes in less known small market capitalization companies and jacked up their prices through circular trading with other traders, and collusion with these companies and large institutional investors. This resulted in steep hikes in share prices. It later transpired that promoters and industrialists often gave Parekh funds to artificially rig up their share prices. This set of ten stocks was colloquially referred to as "K-10" stocks and Parekh was playfully referred to as "Pentafour". The RBI commenced an investigation against Parekh. Around the same time, a bear cartel of brokers in Mumbai opposed to Parekh tried to dump their shares of K-10 stocks. Panicking, Parekh sold off his entire ownership of the so-called K-10 stocks that he had successfully jacked up over the past two years. This resulted in a stock market crash the next day, resulting in large-scale losses for large institutional investors, including insurance companies and mutual funds. A 30 member Joint Parliamentary Committee (JPC) investigation ensued which found that Parekh had been involved in circular trading throughout the time period from and with a variety of companies.

When the Securities Exchange Board of India (SEBI) started scanning an entire spectrum of IPOs launched over 2003, 2004, and 2005, it ended digging up more dirt and probably prevented a larger conspiracy to hijack the market. It involved the manipulation of the primary market-read initial public offers (IPOs)-by financiers and market players by using fictitious or benami Demat accounts. They then transferred the shares to financiers, who sold on the first day of listing, making windfall gains from the price difference between the IPO price and the listing price. This time, fraudsters targeted the primary market to make a quick buck at the expense of the gullible small investors. Direct Participants (DPs) used retail applicants' shares for reaping benefits in the stock market.

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By Ajay Bidyarth - April 15, 2020 6529

Nathan Wolfe Impact once said “There are commonalities among all the pandemics that occur and what we can learn from them. One commonality is that it comes from animals and the other one is that we wait too long.”

In the year 1720

plague, in the year 1820 cholera outbreak and the most recent pandemic was the Spanish flu of 1920. The researchers said that all of these pandemics above have exactly the same pattern as the coronavirus outbreak. However, the precision with which these pandemics occur at exactly 100 years of age makes us think better about this topic.

Coronavirus disease (COVID-19) is one such infectious disease that has been declared a global pandemic by WHO. Most people infected with the COVID-19 virus experience mild to moderate illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illnesses. The best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, the disease it causes and how it spreads. People can protect themselves and others from infection by washing their hands or using an alcohol-based

ased sanitizer frequently and by not touching their face.

The COVID-19 virus spreads primarily through

droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquettes (for example, by coughing into a flexed elbow, etc). At this time, there are no specific vaccines or treatments for COVID-19. However, there are many ongoing clinical trials evaluating potential treatments.

The first case of this pandemic in India was

reported on January 30th, 2020. After which it has increased substantially around the country to such an extent that the Indian Prime Minister announced a 21-day lockdown around the country.

Rating agencies, both global and domestic, are unanimous that the COVID-19 pandemic will be an economic tsunami for India. Even though the country may not slip into a recession, unlike the Eurozone, the US, or Asia-Pacific that have stronger trade ties to China, analysts believe the impact on India's GDP growth will be significant. The fallout of the move will spill over to the financial year 2021, which begins on April 1.

Moody's Investors Service, on March 27, sharply slashed its projection for India's GDP growth in the calendar year 2020 from 5.3% to 2.5%. The markdown was the second in 10 days and came after prime minister Narendra Modi announced the 21-day lockdown. In its Global Macro Outlook 2020-21, Moody's cited severe liquidity constraints in India's banking and non-banking sectors as a hindrance to growth. The agency's forecast for the global economy was even more stark—a contraction of 0.5% in the ongoing financial year.

"Lower business volumes and occupancies, and

sub-optimal efficiencies will impact the profitability of companies. While some affected companies may initiate cost-curtailment measures, these may not be enough given their high fixed costs. That could impair their credit files," says Subodh Rai, senior director, CRISIL.

Neeraj Kumar, a migrant worker, decided to

flee. He and his family joined a throng of people leaving the city soon after the lockdown announcement was made. Public transport systems were stopped, leaving people with no choice but to walk. Mr. Kumar, his wife, and their 10-year-old daughter had already walked more than 40km (24 miles) when we spoke to him.

"There is no work here, that is why we are running away. There are no buses, I have to walk another 260km to get to my village," he said.

The situation of workers following the lockdown is no better. Mohammad Alam is one of the thousands of workers standing in a food queue in India's capital, Delhi.

The

factory where he worked has shut down after Prime Minister Narendra Modi announced a 21-day lockdown to stop the spread of coronavirus.

A daily-wage laborer, he has no other source of income, so he has been forced to come to a government center for food. "I don't know how I will survive; I will have to borrow to feed my family," he says.

India has announced a \$23bn (£18bn) relief package to help people like Mr. Alam and Mr. Kumar who are part of India's unorganized, informal industry that employs 94% of the population and contributes 45% to its overall output. This industry is already bearing the brunt of the lockdown with thousands of finding themselves unemployed overnight. "No-one will be allowed to go hungry," Finance Minister Nirmala Sitharaman said while announcing the package – a combination of direct cash transfer benefits and food security measures.

But the economic fallout of this unprecedented lockdown has been dire. Businesses have closed, unemployment has risen and productivity has fallen. India's growth engine was actually sputtering well before the threat of the outbreak arrived. Once one of the fastest-growing economies in the world, its growth slowed to 4.7% last year – the lowest level in six years.

Unemployment was at a 45-year high last year. The industrial output from the eight-core sectors at the end of last year fell by 5.2% – the worst in 14 years. Small businesses had only just begun to recover from the controversial 2016 currency ban that came as a body blow to the cash-consuming informal economy. Now, experts say the coronavirus outbreak is likely to further cripple the already frail economy.

There is little finance minister Nirmala Sitharaman and RBI governor Shaktikanta Das can do if COVID-19 forces a virtual lockdown of commercial hubs in India, like it had done in China and has in Italy. Lights out in Mumbai and Delhi alone, the nerve centers of India, will cause great damage to the Indian economy. Indeed, COVID-19 can be a massive blow to the slowing Indian economy, particularly small business, the SME sector which had recently shown improvement since demonetization took place.

This is a war-like situation for the Indian economy as the malls and theatres are empty. Schools are shut for contingencies and some states have even announced a complete shutdown of all services. So while most welcome the government's measures, they feel much more is needed to be done to minimize the economic impact. "While free extra rations have been sanctioned, how will the poor access what is due to them?" wonders economist Arun Kumar.

"The government should

devise a way of using the army and state machinery to physically distribute food to the poor." With thousands of migrant workers stuck miles away from their homes, the seamless distribution of cash and food needs to be the government's top priority, he adds. And it's not just migrant workers at risk. Farmers are also vulnerable to a potential economic shock from the lockdown – the agriculture industry contributes nearly \$265bn to GDP. The government says it will give farmers 2,000 rupees (\$30) in April as an advance payment from an \$80 annual pay-out to tide over the situation.

"This money will be inadequate because exports have stopped. Prices in cities will rise because of profiteering and in rural areas they will drop because farmers won't be able to sell their crop," says economist Arun Kumar. The outbreak has happened at a critical farming time – the new crop is ready, waiting to be sold.

Economists warn India's challenge will be in transporting this food from villages to cities in the midst of the lockdown. If supply chains don't work properly, a lot of food will be wasted and lead to massive losses for Indian farmers. Experts warn that India is also at the brink of a major unemployment crisis. Economist Vivek Kaul says people who work for small businesses may end up with job and salary losses. "I know of places where companies are actively discussing how many people they need to fire," he says and that's not all.

While no sector is immune to COVID-19 disruption, some are more vulnerable. The tourism industry will see great disruptions. The World Travel and Tourism Council calculated that tourism generated 9.2% of the GDP and supported 42.673 million jobs. Tourism dependent states like Kerala, Karnataka earn huge forex but if the disease continues many operators will be forced to go out of the business.

In the exports industry While the gloom and doom surrounding COVID-19 are palpable, the crisis might also throw up some great opportunities for India. There are already reports of several Western manufacturers looking at mo

ving their factories out of China. Many Indian chemical producers have gone on record at having received inquiries from Western manufacturers who earlier never used to look towards India as a source. Tapping these opportunities, however, will require some serious innovation on the policy front. Indian policymakers need to hunker down and plan economic assistance that will not only help India's export sector survive the immediate crisis but also retain stability and resume growth in the medium to long-term.

With flights suspended until mid-April, the shutdown is also bound to push India's fast-growing aviation industry into peril. The Centre for Asia Pacific Aviation (CAPA) has assessed that the Indian aviation industry will post losses worth nearly \$4bn this year. This will likely have a cascading effect, affecting the hospitality and tourism industries. Hotels and restaurant chains across the country are empty and are likely to remain so for several months, sparking worries of large-scale layoffs. The automobile industry, a key indicator of a country's economic growth, has also been forced to hit the brakes – experts are estimating losses of nearly \$2bn.

So, is India's relief package enough?

Experts say it's a drop in the ocean compared to bailouts in countries such as the US, China and Singapore. The stimulus package constituting about 0.8 percent of FY20 GDP, is not at par to address the urgent needs of smaller businesses. Experts say that India definitely needs a larger stimulus package soon to help businesses this extraordinary crisis.

Desperate times call for desperate measures. India has done well in containing this dangerous virus but should act swiftly and decisively, to protect its economy. Clearly there is a need for greater fiscal-monetary coordination to ensure an optimal policy response.

Blackcoffer Insights 16:- Manan Batra(Delhi college of Arts and Commerce) and Akshat Mittal(Shri Guru Gobind Singh College Of Commerce,Delhi)

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By Ajay Bidyarth - April 15, 2020 6181

## INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with this COVID-19 virus will experience mild to moderate respiratory disease and recover without requiring special treatment. Older age people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. The best way to prevent and slow down transmission is well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol-based rub frequently and not touching your face.

The COVID-19 virus spreads primarily through droplets of saliva or discharges from the nose when an infected person suffering from coughs or sneezes, so it is important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow).

At this time, there are no specific vaccines or treatments for this virus. However, there are many ongoing clinical trials calculating potential treatments. Which will continue to provide regular basis information as soon as clinical findings become available

## IMPACT

The emergence of COVID-19 is a tragic public-health emergency. The disease, one hopes, will be brought under control quickly, but the International Monetary Fund is already warning that economic growth in China may slow. As we watch the situation unfold, three broader risks to the global economy are also becoming more apparent and clear.

The first risk is obviously in China itself. While the precise origins of the disease remain unclear, it is hard to take a definite view on whether outbreaks of this kind could be avoided – for example, by better control over hygiene in food markets. But it is painfully obvious that a lack of transparency in China has contributed to fear and even signs of panic around the world.

As financial markets go down in 2007-2008, when the precise incidence of big risks is not well understood, people tend to assume the worse. Rapidly falling asset prices may not contain much information—except that there is not much information to be had.

### The Chinese

authorities surely do not have all the answers at this point, but their inclination to suppress data and interpretation is tremendously unhelpful.

Second, the lack of American leadership is more painfully apparent every day. The United States has the strongest medical-health system and facilities in the world, with the capacity for research and development (government and private) that is second to none. Yet President Donald Trump's administration seems to be concerned primarily with playing down the risks while keeping the virus out of the United States of America – a nearly impossible task.

The private sector is working hard on a vaccine, and this is commendable. Unfortunately, over a longer period of time, the lack of a consistent market for such vaccines has undermined investment in this sector. By creating the world's largest market for many drugs, the US effectively supports research across a wide range of ailments – but only those for which there is large and steady demand in the US.

Even the most fervent believer in Trump's "America First" must be willing to concede that it is not in America's interest for the rest of the world to become sick. These are US allies, friends, and customers. Also, like it or not, few diseases will stop at America's borders. Indeed, the US Centers for Disease Control and Prevention (CDC) has said that the question is not if, but rather when, COVID-19 spreads domestically.

The third risk is in emerging markets and developing countries. Poorer countries are ill-equipped to deal with this kind of disease, as seen in African countries' refusal to airlift their citizens from China.

The news that the coronavirus has reached Italy has shaken world financial markets, but Italy is a relatively well-organized and rich country. A vibrant democracy ensures that people will quickly understand if containment and treatment measures are working.

We should be much more concerned about other countries, where nutrition is worse, housing standards are weak, and disease transmission can occur much more readily. If these countries' health systems come under pressure, the US, Europe, and others should step up quickly with technical assistance and essential supplies. But here, too, there is so far a worrying lack of leadership.

It seems unlikely that this disease will prove to be as deadly as some of those that our ancestors experienced. Medical practice and public health have advanced a great deal. The CDC is an outstanding organization, and the World Health Organization has a strong track record when the chips are down. Private-sector groups of dedicated doctors and nurses have performed extraordinarily well under the most difficult circumstances, such as dealing with Ebola, when they are given a chance. We are fortunate to live in an age that has so many heroic people.

Still, this coronavirus is a warning. Societies neglect access to health-care systems and reduce investments in Research and development at great peril. Diseases are always evolving, and we must continually increase our capacity to understand and fight newly emerging threats.

The best way forward is by strengthening science, training more scientists, and building more labs. Countries that are able to do this like the US should share ideas and knowledge as widely as possible.

Investing more in science is an appealing economic proposition. Given very high rates of social return, basic research across a wide range of activities more than pays for itself

But this is not about economics. More likely than not, one day a scientist will save your life or the life of a loved one because his or her previous work produced a drug, treatment, or just an idea that made a critical difference. We should invest in scientists to save ourselves and our neighbors. Also, we must remember that we have neighbors all over our deeply interconnected world.

## Global

shares take a hit

Big shifts in stock markets, where shares in companies are bought and sold, can affect many investments in pensions or individual savings accounts (ISAs).

### The

FTSE, Dow Jones Industrial Average and the Nikkei have all seen huge falls since the outbreak began on 31 December.

The Dow and the FTSE recently saw their biggest one-day declines since 1987.

## Investors

fear the spread of the coronavirus will destroy economic growth and that government action may not be enough to stop the decline.

### In

response, central banks in many countries, including the United Kingdom, have

slashed interest rates.

That should, in theory, make borrowing cheaper and encourage spending to boost the economy.

Global

markets did also recover some ground after the US Senate passed a \$2 trillion (£1.7tn) coronavirus aid bill to help workers and businesses.

But

some analysts have warned that they could be volatile until the pandemic is contained.

INDIAN ECONOMY

India faces a sharp decline in government revenues and economic growth for at least two quarters as the coronavirus hits economic activity and a fall in investor sentiment impacts privatization plans, government and industry sources said.

Officially, the government is still sticking to the target of achieving 6-6.5% in the next financial year beginning April, while hoping that a fall in crude oil prices could help it garner more revenue and contain a fall in revenue from other sectors but economists and bankers are turning increasingly downbeat about India's economic prospects, especially as the government is betting on filling its coffers through ill-timed asset sales. "We are going to miss the revised revenue targets for the current fiscal year, and will have to lower next year's targets as well," said a senior government official with direct knowledge of budget estimates.

He said receipts from much-delayed privatization of India's second-biggest oil refiner, Bharat Petroleum Corp, could be lower by at least \$2 billion against initial estimates. The company's share prices have fallen by over 27% since January while the broader NSE Nifty 50 index has fallen by nearly 20% following a panic in global markets.

On

Wednesday, the government suspended almost all visas to the country till April

15 to prevent the spread of coronavirus as cases across the region continue to rise. Total cases in the country rose to 73 on Thursday, according to the government. Another senior finance ministry official said some of the proposed share-shale plans in companies like Coal India, Steel Authority of India Ltd (SAIL), NMDC and IRCON have been deferred. The government now expects to raise about Rs 50,000 crore (\$6.75 billion) against the downwardly revised target of Rs

65,000 crore for the ongoing financial year ending in March, the official said. Another senior official in the tax department said receipts have been hit due to a fall in consumer demand as reflected in the lower sales of autos, passenger traffic, hotel bookings, and retail sales.

Tour operators estimate January-March quarter earnings could fall by more than 60% from a year ago as hundreds of thousands of tourists cancel travel, hitting hotels, airlines and tax collection for the federal and state governments. India attracts nearly one million foreign tourists a month, and the travel restrictions could impact for the next few months. The situation in India was still far better compared to some other countries hit by a global pandemic, Sarkar said.

India annually earns nearly \$30 billion from foreign tourist arrivals, and the industry is worried that a global spread of the virus will harm already weakened economic growth.

As this situation will take time to recover and economy not only of India but globally is in a recession it up to government how they come up with their measure.

If we look at recent action of US FED and other countries step it took a thought that this pressure is deeper than it looks like and this situation is very different than that happen in 2008 crisis or that in 1998 as that time none of the factories are closed but this time work has been stopped and more importantly economy from past 1 year is facing slow down in many sectors so this will impact small companies badly.

But if we think in another way there will be a shift in a lot of pattern like people will now go for short term investment in the stock market due to uncertainty of life, Insurance stocks will be benefited, logistics & distribution network will totally change as factories will now try to procure material from nearest location and there will be an increase in the personal saving of people because of which automakers and real estate sector may be hit hard.

If we estimate, it will take around 1 year to get back in a track from now and all this will happen if the government and central bank continuously come up with relief measure

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By Ajay Bidyarthi - April 15, 2020 6420

From the economic point of view, India is confronted today with perhaps its greatest emergency since independence. The global financial crisis in 2008-09 was a gigantic demand shock, but our workers could still get-up-and-go to work, our firms were coming off years of steady growth, our financial system was largely sound, and our government finances were b looming. None of this is true today as we fight the coronavirus pandemic. Yet there is also no reason to despair. With the right undertakings and priorities, and drawing on India's many sources of strength, it can kill this virus back, and even set the stage for a much more hopeful tomorrow. The rampant spread of COVID-19 outbreak, across borders and geographies, has severely impacted almost the whole world and triggered significant downside risks to the overall global economic outlook. Steps taken to contain its spread, such as the nationwide lockdown announced by the Indian Government, have brought economic activity to a near – standstill with impacts on both consumption and investment. India's real GDP growth decelerated to its lowest in over 6 years in 3Q 2019 – 2020 and the outbreak of COVID – 19 posted fresh challenges. For most businesses, the slowdown could be in the form of supply disruptions, fall in consumption demand, and stress on the banking and financial sectors. In sum the three major contributors to GDP will all get affected i.e. Private Consumption, Investment and External Trade.

Figure 1.1: Showing quarterly growth in GDP (in %). Source: MoSPI

Assessing the exact impact for India is hard

with uncertainty on how long the pandemic would last. Three likely scenarios for India's economic situation could be:

An

optimistic situation that shows a temporary impact of COVID-19 and a V-shaped recovery: Under this forecast scenario, the COVID-19

pandemic in India could be controlled efficiently by June 2020. The

government's effective interventions may improve healthcare resources and services, and India's economy could revive from Q2 FY2021 onwards.

Scenario 1

Quarters

Q4 FY20

Q1 FY21

Q2 FY21

Q3 FY21–Q4 FY22

GDP growth

4.0–4.2%

2.5–2.8%

4.1–4.3%

5.5–6.8%

Inflation

Moderate  
Low around the target rate  
Low  
Rises but moderate

Figure 1.2: Showing an optimistic situation. Source: Deloitte

A somewhat optimistic scenario with a severe and extended impact of COVID-19 and a U-shaped recovery:  
In the second scenario, India may see limited success in controlling the spread despite the focus on public health-related measures and fiscal policies. With stringent restrictions on movement, the current lockdown may extend until September 2020. Some industries will face pressure as rising debt and defaults affect market sentiments, stress the financial sector, and reduce domestic demand.

#### Scenario 2

##### Quarters

Q4 FY20  
Q1–Q3 FY21  
Q4 FY21  
Q1 FY22– Q4 FY23

##### GDP growth

4.0–4.2%  
2.2–3.0%  
4.2–4.4%  
5.5–7.5%

##### Inflation

Moderate  
Low moderates by Q4 FY21  
Moderate  
Rises above 4 %

Figure 1.3: Showing an optimistic scenario with a severe and extended impact of COVID-19. Source: Deloitte  
In scenario 2, inflation picks up in H2 FY 2021 as demand revives faster than supply. Inflation may increase above the target range (4 percent) for a short time in FY 2021 because of economic overheating. In this scenario, inflation remains 3-4 percent during this period despite weak demand because of a sharper fall in production.  
A pessimistic situation, with a prolonged severe downturn leading to a new low-level normal: Under the third scenario, the pandemic may spread rapidly (amidst strict movement restrictions) until Q4 FY2021. Due to the steep decline in demand, the economy will witness production cuts. The situation will ease only in Q1 FY2022 after medical interventions. Subsequently, the economy will revive modestly as consumers will continue to be wary of spending, which will affect long-term spending. Over the next two years, the model predicts the economy to grow by 1.5–2%, lower than it would have grown otherwise, with unequal recovery across sectors.

#### Scenario 3

##### Quarters

Q4 FY20  
Q1–Q4 FY21  
Q1–Q4 FY22  
Q1 FY23–Q4 FY23

GDP growth  
4.0–4.2%  
2.2–3.5%  
4.4–4.5%  
5–6%

##### Inflation

Moderate

Moderate

Moderate

Figure 1.4: Showing pessimistic situation, with a prolonged severe downturn.

Source: Deloitte.

Impact on the Demand side:

Private

Consumption: The

lockdown is likely to have a sizeable impact on the economy, most significantly on consumption, which is the biggest component of GDP.

Steep fall in the consumption of non-essential goods due to a significant reduction in urban transactions. Severe impact on the domestic supply chain disruptions due to the 21-day lockdown can affect the availability of essential commodities. Weak domestic consumption and consumer sentiment will have firms delay their investment and putting additional pressure on growth.

Informal sector: Rajasthan, Punjab, Andhra Pradesh, Chhattisgarh, and Gujarat are among the top five states with the highest urban informal workers (non-agriculture)

Around 37 percent of regular salaried employees in urban India are informal workers, who will face uncertain income following the stalling of urban activity. INR 1.7 trillion stimulus package, focused majorly on cash transfer and food security was unveiled. The income shock to migrant workers has resulted in a massive reverse migration, the effect of which will only unravel over time.

Impact on the Supply side:

The shutdown of factories and the resultant delay in the supply of goods in China could result in the supply chain of both raw materials and intermediate goods for Indian companies importing from there. While disruption in output in China could impact some Indian Industries, the economy at large may be relatively insulated given its low reliance on intermediate goods from China as well as the common practice in Indian firms of stockpiling inventory. Another challenge is the disruptions of the domestic supply chain due to the lockdown, which may create a shortage of inputs for Indian firms when they restart their operations.

Figure 1.5: Showing supply chain disruptions. Source: The Economic Times.

What has been done so far?

India has already undertaken the following measures to counter the impact from the pandemic:

A three-week countrywide lockdown and fiscal steps, coupled with monetary measures from the RBI, to provide relief for all, especially the vulnerable and the disadvantaged. A government has directed the employers to not terminate or cut wages, particularly that of casual or contractual workers, and low-paid workers to also take paid sick leave and unemployment allowance through the insurance cover. Government to contribute to both employees' and employers' share in the Employees' Provident Fund. RBI relaxes lending norms for banks, injects cash into the system, slashes interest rates, and relaxes repayments for three months. Managing the pandemic and the resultant public health crisis. Protecting income and employment, particularly for the disadvantaged and vulnerable sections of the society.

What can the Corporates do?

The crisis is a story with an uncertain ending. However, what is clear that the COVID-19 has introduced new challenges to the business environment which called for a measured, practical and informed approach from political and business leaders. A company needs to think and act across five horizons:

Resolve: Address the immediate challenges that COVID-19 represents the institution's workforce, customers, technology, and business partners. Resilience: Address near-term cash management challenges and broader resiliency issues during virus-related shutdowns and economy knock-on-effect. Return: Create a detailed plan to return the business to scale quickly as COVID-19 situation evolves and knock-on-effects become clearer. Reimagination: Re-imagine the next normal: What a discontinuous shift looks like and implications for how institutions should

reinvent Reform: Be clear about how regulatory and competitive environments in India may shift.

Figure

1.6: Showing the

crisis as a lesson to businessmen in assessing risk to their business. Source: The Economic Times. Collectively, these five stages epitomize the inescapable of our time: the battle against COVID-19 is one that leaders today must win in order to find an economically and socially feasible path to the next normal.

What can the government do?

The government should consider certain measures in order to manage the pandemic. The following steps and the recognition of the likely scenarios for the Indian economy can enable policymakers to identify appropriate countermasures to stem the spread of the pandemic:

Build a national database of the reachable physical health infrastructure and medical and para-medical resources. The public and private health care facilities can be segregated by labeling a section of accessible hospital beds for treating COVID-19 patients only. Extend additional one-time budgetary support to augment the public health care system in terms of facilities, equipment, and human resources capacity. Earmark financial resources to provide one-time grants/financial support to research institutions and leading pharmaceutical/biotechnology/medical equipment companies. Extend the coverage of Ayushman Bharat and other applicable insurance schemes to COVID-19 if not already included. Tweak the existing customs duty structure for select components, which are essential for manufacturing testing kits, ventilators, etc. Enable access to funds for businesses to run their day-to-day operations and service their debt. Ensure the smooth supply of essential products and commodities to contain the economic impact of the COVID-19 outbreak. Provide credit support to Medium and Small Enterprises. Encourage investments such as one-time set off of capital investments made by corporates for income-tax computations.

Therefore, the question remains whether the stimulus is enough or not – both quantitatively and qualitatively? Would it be able to help the economy absorb the shock of the lockdown? Compared to what the USA (2 trillion USD), Germany (610 billion USD), UK (424 billion USD), France (335 billion USD), Spain (218 billion USD), China (78.8 billion USD) and Italy (27.3 billion USD), the spending by India (1,70,000 crore – 22.5 billion USD) may prima facie appear to be insufficient. However, such a comparison is not easy and straightforward because a lot of factors are to be taken into account. In addition, the important factor that needs to be considered is whether at this point in time the country is able to spend more than this or not. Against a revised budget estimate of Rs. 21,63,000 crore for 2019-20 towards Tax collections, the collection as on 31st Dec 2019 was to the tune of Rs. 13,83,000 crore only with a clearly huge shortfall. In addition, a substantial amount would also have to be spent now to tackle the pandemic which is of utmost priority. On top of it, huge additional spending would jeopardize the fiscal deficit discipline although, at times of emergency, fiscal deficit should not be a matter of concern at all.

It would also have to be seen how long this virus continues to affect India and going by the hygiene standard and herd mentality that we have, the virus continues to affect us beyond 3 months and extends to 6-8 months, quite obviously these packages would be grossly insufficient and more money will have to be pumped into the economy. If the need arises, currency notes will have to be printed and circulated and concerns about higher fiscal deficit should be simply pushed to the backseat. The corporate sector and a section of large-hearted people have also come forward at this time of distress to support the government initiatives in fighting this menace which should provide some financial comfort to the Government.

The pandemic has appeared from nowhere as a potential death knell to the World economy which is already under stress and India is no exception. There is no second opinion that this pandemic has hit the world very hard and would continue to do so in the foreseeable future. Whether India can emerge from the medical pandemic as well as the economic pandemic relatively unscathed remains to be seen. We will have to take care of our lives as well as the livelihoods of our citizens. As Indians, we hope, we shall overcome. Together we can do this and we will.

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By Ajay Bidyarth - April 16, 2020 11299

In today's day and age of hyper-connectivity, celebrities – dubbed by Fraser and Brown (2002) as people who are famous for being famous and may or may not always serve others sacrificially – live in glass houses that are open to the prying eyes of the public. Notification bars are ever abuzz with news about when these celebrities wake up, what they wear to the gym, what they eat, and where they go on their vacations. In the idealized and idolized eyes with which society views celebrities, this unceasing visibility gives them an all-pervasive influence. The dominance of celebrities in swaying opinions of their acolyte is well-established – from advertisements in the print and pixel mediums, brand endorsements, and integrations, the evidence of exploiting celebrity infl

uence is vast. However, today more than ever before, this influence is creeping away from the world of consumerism and into governance, policy, and politics. With an increasing number of public figures overtly taking strong and stronger political stances, making moves charged with a political motive, and eventually entering the sphere of legislature and bureaucracy, the scope of having a public influence has come to mean much more than it used to, thereby begging the question – how well-placed are personage in the world of politics? Should celebrities be allowed to join politics?

The interplay between the seemingly contrasting worlds of celebrities and policy-makers have come into increasing contact, in India and the rest of the world-leading pop-music artists back presidential candidates, internationally acclaimed actors attempt international diplomacy, films are claimed to be vehicles of political messaging, Prime Ministerial banquets engage celluloid stars, and so on. The ‘influence’ that stars exert on the world of politics seems to encapsulate an entire spectrum of involvement – at the zenith of which are the celebrities who actually set foot into parliamentary assemblies and councils, to represent the public that they once only influenced.

Although the phenomenon of the seeping of public influence into public policy has stretched through much of the 20th century, Choi and Berger (2001) suggest that the celebrity-politics connect continues to strengthen, much more than it did a few decades ago, as we trudge further into the century. Of the myriad causalities that underlie this circumstance, the global internet, where fame isn’t restricted to the confines of tangible achievement has been theorized to be a significant driver. In her 2009 book, Hyde labels this spectacle as a ‘mission creep’, where the enterprise of celebrities is expanding beyond its primary goals.

A prodigious public following seems to be the parallel between the worlds of politics and personage, which paves the path for celebrities to cross over to politics. Celebrities seem to be able to transition into politics with a certain grace, having already learned to live in the public’s eye, and established themselves, allowing the carry-over of their already-known traits as celebrities into their role as policy-makers. The visibility that autochthonous politicians work years to nurture, celebrities already have as they descend into the political sphere. In one of the best-known instances of a celebrity transitioning into politics, Ronald Reagan walked away from Hollywood and into the White House, carrying with him his trademark charismatic on-screen personality that spilled over into his politics. Initially serving as the governor of California for 15 years in the late 1960s, Reagan served two terms at the Oval Office. The voters knew who Ronald was – those who closely followed the trends of the red and blue – but also those who did not, giving Reagan the edge that propelled him towards success. On the other side of the globe, India saw much the same trend as an on-screen persona aiding the creation of an off-screen political career. Ramanand Sagar’s television series ‘Ramayan’, based on the Hindu mythological epic, was revolutionary in the pious Indian society of the 1980s when television shows were still novel. It has been recounted on many an occasion that audiences would often offer their prayers to the television screen, every time Arun Govil, who portrayed the deity ‘Ram’ made an appearance on screen. Having garnered a devout, dutiful fan following, Govil, and his other co-actors from the show turned to the world of politics, where their godly association in the public’s eyes helped them make a mark. Even the Philippines has shown ample evidence of celebrities time and again swooping in to claim political victory with their stardom and popularity, that their opponents lack.

Very often, the sentiment of anti-incumbency seems to be the golden ticket that lets celebrity politicians snatch political power from consummate politicians. Indeed, various political theorists suggest that anti-incumbency happens to be amongst the more effective strategies to secure vote banks. Until 31st December 2018, Ukrainian actor, screenwriter, and director Volodymyr Zelensky only played the lead in a sitcom that tells the story of a schoolteacher who accidentally becomes the president. It was that winter that Zelensky claimed that he was contesting the presidential elections to “change the mood and timbre of the political establishment” and to “bring professional, decent people to power”. Zelensky took the premise of his wildly popular show from the reel to the real, as he crushed rival, a seasoned politician, and incumbent Poroshenko in a landslide victory. Has Zelensky proved a better representative of his people than his predecessor? Time is yet to deliver its verdict. But the gushes that he invoked in the people of Ukraine, and his plea to oust ‘the ruling class’ played their role in assuring Zelensky 73% of the plebiscite. In the early 2010s in India, similar anti-incumbent sentimentalities were played into by the many celebrities including musician Vishal Dadlani, hockey legend Dhanraj Pillay, singer Jaspinder Narula, and others – all of whom joined hands with Arvind Kejriwal’s ‘Aam Aadmi’ movement that aimed to rid the existing political system of its ills.

And so, innumerable celebrities across countries and cultures claim the throne. In fact, a Wikipedia page that maintains an inventory of actor-politician spanning the atlas claims that it ‘may never be able to satisfy particular standards for completeness’ – depicting the sheer number of celebrities who reroute to politics. This begets questioning the congruence of the world of personage and that of politics.

In a research article published in 1995, Meyer and Gamson articulated the possibility of celebrities choosing to politically address only broadly acceptable social causes because they understand their power rests with staying popular, thereby failing to make any appreciable difference. This seems to ring true with some celebrity politicians in India, especially ones who are nominated to the Upper House of the Parliament but fail abysmally to leave a mark. One of many such representatives is Gautam Gambhir, a cricketer-turned-politician who has mostly been shunned for his abject performance in the parliament. Hema Malini, another popular actress who turned to politics, came under heavy criticism when her claim to be a protector of women’s rights wasn’t backed by an effort to fulfill her promises. Owing to such instances, research findings such as those by Nisbett and DeWalt (2016) find that the public often questions the intentions of the celebrities who venture into politics. It may also seem that in entering politics and failing to deliver, celebrity politicians often deprive grass-root political workers of the chance to enter the mainstream of politics.

However, there is ample evidence from around the globe that goes to prove that celebrities can, in fact, make their mark in the world of governance, independent of their primary identities. Take the South Indian state of Tamil Nadu, for instance, where the political ethos has been consistently overshadowed by celebrities from the world of showbiz, for at least the last 40 years. As per data from the Ministry of Statistics & Programme Implementation, Tamil Nadu is amongst the top-performing states in the country, having the second-highest GDP. Most celebrities in Tamil Nadu who approached politics have exhibited extraordinary political will and caliber. The late actor-politician J. Jayalalithaa, or ‘Amma’, ran successful terms as chief minister and is still considered a mother figure by hordes of her followers. Another stalwart in the landscape of Tamil Nadu, Dr. MG Ramachandran, continues to be celebrated as one of the most influential chief ministers and is lauded for his large-scale reforms. In being the forerunner of some of the changes that propelled the state towards progress, including easing caste tensions and other communal violence, ‘MGR’ as he is better known, is remembered as much for his governance as he is for his innings on screen.

More often than not, celebrity engagement in politics has been used to woo voters from the younger strata of the population. Empirical studies such as the one by Austin, Vord, Pinkleton, and Epstein (2008), have conclusively shown to enhance political engagement by younger voters. Along similar lines, Jackson (2008) found that young people are more likely to agree with political positions that are endorsed by politicians. In fact, many modern political theorists are of the belief that the involvement of celebrities in politics allows for otherwise uninvolved or apathetic veins of the demographic, to be active participants in democracy. Hillary Clinton aimed to do just that when she got the Billboard-topping artists Beyoncé and Jay-Z to take center-stage at her rally in Cleveland, in the weeks leading up to the 2016 US presidential elections – in fact, as multiple sources suggest, this rally did see a surge in millennial supporters. In such a case, it might be in the benefit of the community to have more celebrities endorse and engage in politics in order to nurture a more vibrant and engaged y

outh.

From our vantage point today, the relationship between personage and politics seems to be a central fixture in society and is here to stay. What remains to be done, however, is to ensure the symbiotic course of this relationship – to scrutinize and critique the celebrities who knock the doors of politics and to secure their promises of beneficence and non-maleficence to the public that it seeks to serve. Yet, it may seem that these are benchmarks that need to be met by any and all servants of the people – celebrity or not, but in the world that we live in, this is certainly not the case. Politicians – celebrity or not, largely happen upon the sphere of governance without a lot of experience backing them and learn to navigate the maze of politics on the job. Ultimately, like all things in democracy, the government is of the people and its representatives are of them, and for them. The eventual endorsement of its leaders – celebrity or not – can come, not from data-based analyses and elaborate critique, but from the people. Should celebrities be allowed to enter politics? The question remains unanswered. Or rather, is answered by the democratic exercise itself – with the beeps of electronic ballots election after election, when the people – the real ‘influencers’, choose.

Blackcoffer Insights 16:-Guhan Narayanan(IIT Madras)and Preeti Kodancha(CHRIST Bangalore)

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# Parse the HTML content using Beautiful Soup  
soup = BeautifulSoup(response.content, "html.parser")  
  
title = soup.title.get_text()  
  
# Find the article text  
article = soup.article.get_text()  
  
# Print the results  
print("Title: ", title)  
print("Article: ", article)  
with open("126.txt", "w", encoding="utf-8") as file:  
    file.write("Title: {}\n\n".format(title))  
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Blackcoffer What We Think Healthcare How prepared is India to tackle a possible COVID-19 outbreak?

By Ajay Bidyarthi - April 16, 2020 6333

Frankly, no! The state of the public healthcare system, still vast, is very fragmented and cannot scale up rapidly enough to face the challenge of a pandemic such as COVID-19. The origin of public healthcare lies in the British colonial period where such facilities were provided only to British officers and their families stationed in India. From the 1960s onwards, the independent government of India stressed more upon healthcare and it led to the creation of the modern public healthcare system in India. The healthcare system is organized into primary, secondary, and tertiary levels. At the primary level are Sub Centre's and Primary Health Centre's (PHCs). At the secondary level there are Community Health Centre's (CHCs) and smaller Sub-District hospitals. Finally, the

top level of public care provided by the government is the tertiary level, which consists of Medical Colleges and District/General Hospitals. The number of PHCs, CHCs, Sub Centre's, and District Hospitals has increased in the past six years, although not all of them are up to the standards set by Indian Public Health Standards. But there are still critical challenges to the existing system.

One of the major areas is the lack of awareness of diseases, especially communicable diseases among the general population of India. This challenge becomes more complicated at the lower strata of society, especially poor households, migrant laborers and homeless people who do not have the proper channels of communication available to get the necessary information from the health experts. Add low educational status, poor functional literacy, low accent on education within the healthcare system, and low priority for health in the population, among others and you see the magnitude of the problem. According to a recent study initiated by the faculty and students of IIT-Hyderabad and IIT-Bombay, in Tier-1 cities, it was found that about 12 percent of the respondents switched from public to private mode during the third week of COVID-19. This modal shift was about 9 percent in Tier-2 cities and about 7 percent in Tier-3 cities. Moreover, nearly 48 percent of people said that they did not travel to work during the third week of March, whereas 28 percent had the same frequency of travel to work. When inquired about the cancellation of trips between the cities using major modes of transportation, around 18 percent said they cancelled their flights whereas, 20 per cent of respondents cancelled their train journeys. This indicates that awareness about COVID-19 is higher in Tier-1 cities, in comparison with Tier-2 and Tier-3 cities. But national level, state level and door-to-door campaigns along with targeted media campaigns may enable the knowledge of the pandemic to spread fast among the local populace.

The second challenge is access to public healthcare in India. Access (to healthcare) is defined by the Oxford dictionary as "The right or opportunity to use or benefit from (healthcare)" Physical reach is one of the basic determinants of access, defined as "the ability to enter a healthcare facility within 5 km from the place of residence or work". Using this definition, a study in India in 2012 found that in rural areas, only 37% of people were able to access IP facilities within a 5 km distance, and 68% were able to access out-patient facilities. Furthermore, it was postulated that in general, the more rustic (rural) one's existence – the further one lives from towns – the greater are the odds of disease, malnourishment, weakness, and premature death.

The third is the planning portion related to the preparedness of the pandemic. Planning for a pandemic such as COVID-19 has never been done extensively in India as we had no recent history of such a communicable disease which spreads rapidly in crowded locations, which about a quarter of the population live in. The recent national lockdown called led to an increase in police violence who have not been sensitized how to deal in such a crisis and the humanitarian crisis facing migrant laborers, an important part of the Indian economy, who have lost their jobs and facing a lack of public transport, have to force to walk thousands of miles to reach their native villages. The ongoing slump in the economy has been further exacerbated by the pandemic and the resultant lockdown. And there have been growing complaints by healthcare professionals, who are fighting in the front of this pandemic, of lack of Protective Personal Equipment's (PPE's) to protect themselves and their patients from COVID-19. The lockdown has hit HIV+ and chronic patients hard who need constant medication to maintain their fragile condition. Elderly people, who are often alone and have medical conditions, have been left without essential support. Ironically, these are the same group of people who are at an immediate threat from COVID-19.

I am optimistically hoping, based on the ingenious and creativity of our citizens, that we tide over these tough times and fundamental changes to our healthcare system are made with this sober learning experience to prevent a repeat of what is happening today.

Blackcoffer Insights 16:-Sandeep Chakravarty

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By Ajay Bidyarthi - April 23, 2020 6358

Every prophet of doom, unless he also happens to be a psychopath, hopes that his predictions will not be borne out. This is also true for the epidemiologists and virologists who have been warning the world since January that the novel SARS-CoV-2 virus poses a severe threat to public health around the world. The name Coronavirus itself, is vicious enough to terrify those who otherwise are fearless in the face of any ball game. Tracing back to the origins of the now pandemic, we find that the coronavirus emerged in Wuhan, a city of 11 million people in China's Hubei province, in late 2019. Cases of the disease grew by several thousand per day in China in late January and early February, the peak of the epidemic there. The number of infections appearing each day has since plummeted in China, making the outbreak a global pandemic that has engulfed over 214 countries around the globe.

Besides being a health crisis, the virus has already brought a major downfall in the world economy with the IMF estimating the coronavirus-induced global downturn to be 'way worse' than financial crisis. As the coronavirus spreads across the globe, it appears to be setting off a devastating feedback loop with another of the gravest forces of our time: economic inequality. Research suggests that those in lower economic strata are likelier to catch the disease owing to their inability to meet the rising drug prices. According to the International Labour Organization(ILO), COVID-19 will have far-reaching impacts on labor market outcomes. Beyond the urgent concerns about the health of workers and their families, the virus and the subsequent economic shocks will impact the world of work across three key dimensions.

Initial ILO estimates point to a significant rise in unemployment and underemployment in the wake of the virus. Based on different scenarios for the impact of COVID-19 on global GDP growth, preliminary ILO estimates indicate a rise in global unemployment of between 5.3 million ("low" scenario) and 24.7 million ("high" scenario) from a base level of 188 million in 2019. The "mid" scenario suggests an increase of 13 million (7.4 million in high-income countries). Though these estimates remain highly uncertain, all figures indicate a substantial rise in global unemployment. For comparison, the global financial crisis of 2008-9 increased unemployment by 22 million. While self-employment does not typically react to economic downturns, it acts as a "default" option for survival or maintaining income – often in the informal economy. For this reason, informal employment tends to increase during crises. However, the current limitations on the movement of people and goods may restrict this type of coping mechanism.

Labour supply is declining because of quarantine measures and a fall in economic activity. At this point, a preliminary estimate suggests that infected workers have already lost nearly 30,000 work months, with the consequent loss of income (for unprotected workers). Employment impacts imply large income losses for workers. Overall losses in labour income are expected in the range of between 860 and 3,440 billion USD. The loss of labour income will translate into lower consumption of goods and services, which is detrimental to the continuity of businesses and ensuring that economies are resilient. Working poverty is also likely to increase significantly. The strain on incomes resulting from the decline in economic activity will devastate workers close to or below the poverty line. The growth impacts of the virus used for the unemployment estimates above suggest an additional 8.8 million people in working poverty around the world than originally estimated (i.e. an overall decline of 5.2 million working poor in 2020 compared to a decline of 14 million estimated pre-COVID-19). Under the mid and high scenarios, there will be between 20.1 million and 35.0 million more people in working poverty than before the pre-COVID-19 estimate for 2020.

Who are particularly vulnerable? Epidemics and economic crises can have a disproportionate impact on certain segments of the population, which can trigger worsening inequality. Based on past experience and current information on the COVID-19 pandemic and insights from previous crises, a number of groups can be identified:

Those with underlying health conditions and older people are most at risk of developing serious health issues. Young persons, already facing higher rates of unemployment and underemployment, are more vulnerable to falling labor demand, as witnessed during the global financial crisis. Women are over-represented in more affected sectors (such as services) or in occupations that are at the front line of dealing with the pandemic (e.g. nurses). The ILO estimates that 58.6 percent of employed women work in the services sector around the world, compared to 45.4 percent of men. Unprotected workers, including the self-employed, casual, and gig workers, are likely to be disproportionately hit by the virus as they do not have access to paid or sick leave mechanisms, and are less protected by conventional social protection mechanisms and other forms of income smoothing. Migrant workers are particularly vulnerable to the impact of the COVID-19 crisis, which will constrain both their ability to access their places of work in destination countries and return to their families.

The extent and severity to which the coronavirus pandemic will impact the fight to end extreme poverty is still unknown, but it is expected that the crisis will devastate the world's most vulnerable people including the world of work. The virus is already disproportionately impacting the poor in wealthy countries, where the most known cases are concentrated. Experts are urging the world to prepare to lend extra support to low-income countries to address the pandemic. COVID-19 cases are more likely to go undetected or to be under-detected in developing countries that have fewer resources available to tackle a pandemic. Countries with large poor populations including Brazil, India, Indonesia, Nigeria, and Pakistan have confirmed few cases, but have been slow to respond to the threat, according to NPR. Preventative care and health education are less accessible to low-income people who are more likely to have pre-existing conditions, catch COVID-19, and die from it. People living in poverty are also more likely to hold insecure jobs and cannot afford to stay home sick from work.

In times of crisis, International Labour Standards provide a strong foundation for key policy responses that focus on the crucial role of decent work in achieving a sustained and equitable recovery to mitigate the impacts of COVID-19 on the world of work. These standards, adopted by representatives of governments, workers' and employers' organizations, provide a human-centered approach to growth and development, including by triggering policy levers that both stimulate demand and protect workers and enterprises.

Policy responses should focus on two immediate goals: Health protection measures and economic support on both the

he demand- and supply-side of the associated cause.

First, workers and employers and their families should be protected from the health risks of COVID-19. Protective measures at the workplace and across communities should be introduced and strengthened, requiring large-scale public support and investment. Second, timely, large-scale, and coordinated policy efforts should be taken to provide employment and income support and to stimulate the economy and labor demand. These measures not only cushion enterprises and workers against immediate employment and income losses, but they also help prevent a chain of supply shocks (e.g. losses in workers' productivity capacities) and demand shocks (e.g. suppressing consumption among workers and their families) that could lead to a prolonged economic recession.

In such challenging times, many countries have come forward to protect their workers in the workplace with decisive measures to combat the spread of the disease, while ameliorating its pernicious effect on the economy and labor market across the three policy pillars: protecting workers in the workplace, stimulating the economy and labor demand, and supporting employment and income. Some of the policies include Working arrangements, including telework; Occupational Safety and Health (OSH) advice; Expanded access to paid sick leave; Prevention of discrimination and exclusion. While these measures will no doubt help to contain the pandemic, to respond to the emergency needs it has generated and to pave the way to a gradual recovery, it is clear that more needs to be done. Past crises and the experiences of countries, which have reacted too late in the context of the current COVID-19 crisis, show that preparedness and early action is critical.

The coronavirus pandemic is a test. It's a test of medical capacity and political will. It's a test of endurance and forbearance, for believers a test of religious faith. It's a test, too, of a different kind of faith, in the strength of the ideas humans choose to help them form moral judgments and guide personal and social behavior. The epidemic forces everyone to confront deep questions of human existence, questions so profound that they have previously been answered, in many different ways, by the greatest philosophers. It's a test of where all humans stand. What is right and what is wrong? What can individuals expect from society, and what can society expect of them? Should others make sacrifices for me, and vice versa? Is it just to set economic limits to fighting a deadly disease? How long will we stay that way? And as the epidemic grows worse and brings the disease within fewer degrees of separation for everyone, we may well find that the notion of loving thy neighbor as thyself becomes far more potent. At last I would like to conclude by saying that COVID-19 is something we all face as a community, and thus something that we have to solve as a community, not with weapons, but with goodwill and common efforts.

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# Parse the HTML content using Beautiful Soup  
soup = BeautifulSoup(response.content, "html.parser")  
  
title = soup.title.get_text()  
  
# Find the article text  
article = soup.article.get_text()  
  
# Print the results  
print("Title: ", title)  
print("Article: ", article)  
with open("128.txt", "w", encoding="utf-8") as file:  
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BlackcofferBFSICapital MarketsWhat We Think Controversy as a Marketing Strategy

By Ajay Bidyarth - April 28, 2020 8438

Organizations burn a lot of resources to build one iconic image. Their brand is not just a picture, a logo, and colors; but an emotional connection with the consumer. It develops by making an impression on the consumers each time they interact with the products or services and it becomes ingrained in the consumers' minds. Now, if it takes great efforts to build such impression, recognition, and trust, why would a firm do something controversial that could burn their own hands?

We see hundreds of ads a day, but only a few get noticed. Here is where a controversy comes into play. We would definitely notice something that disagrees with our thoughts or mentally disturbs us. So, such ads stand out. In controversy marketing, a firm creates a controversy which gains them attention really quick, and the word spreads widely. They believe that in order to stand out, they can't play it safe always. A controversial campaign could be about a social issue that could divide the masses, stating political opinions, or presenting something that doesn't associate with their image etc.

Key features of a well-crafted controversial campaign:

Choosing the correct subject. It could be a taboo or a debatable topic. While, both would be controversial, a taboo is more likely to draw a flack than a debatable topic. The campaign should be more focussed on the issue than on the brand itself. As a result, the debate would be about the issue and not the brand. The campaign should always promote a respectful and healthy discussion; not a fight or abuse. It should present the facts and avoid over-sensitising the issues. No issue/current situation should be exploited to a point where it becomes the tone of the firm. If a controversy does not settle down early, over the time it would become a part of the image of the company. The firm should be always prepared with a contingency plan or a proper response in case if the campaign backfires or does not take the expected course.

Advantages of controversial marketing:

Increasing awareness: A well crafted ad can draw the attention of the unaware audience, making them explore the brands' product portfolio. Some of them, might be potential customers. Shifting Brand Image: A brand always needs to evolve, as per the needs of its target audience. Here, a controversial marketing strategy could be used to shift the image in a short span. It could also define the future path for the brand. Emotional Connect: If a brand is successful in winning the heart of a consumer, it half the job is done. Even if a controversy can divide the audience, some will appreciate the message of the brand. They will relate more to the brand and can become loyalists. Start a meaningful discussion: Particularly if the campaign is designed around a social issue; the campaign not only becomes relevant to the company but also to the society. It breaks the stigma around a topic that people frown to talk about. By communicating to the masses about such a topic, the company eases the air, which can lead to healthy discussions. Boost Sales: The most important aspect. If the brand is able to build on the sudden increase in awareness among people, it could boost sales and profitability.

Disadvantages of controversial marketing:

Offensive: In present times, the audience have become highly sensitive and a controversial ad will definitely offend someone. So, we have to weigh the benefits and drawbacks before creating something controversial. Ruin brand reputation: As stated earlier, it puts a high risk on brand reputation. For some consumers, a controversy might also become a reason to not buy the product or service. Specifically, in case of media houses, if a media house gets involved in controversies often, then that reduces their credibility. While it can increase the awareness in a short span of time, it won't work in the long run as this attention is short lived. Internet: They say, anything that goes on the internet, stays on the internet. Due to rise of social media, people have become more conscious of their choices and try to thoroughly evaluate everything. As a result, even one controversial campaign will not be forgotten. Years from now, if the company tries to change their opinion on some issue, then these old controversies will again come up and harm them deeply. A controversial campaign can also attract legal penalties, if it ends up leading to disharmony in the society.

Examples of controversial marketing strategies:

Movie makers frequently follow controversy as a tactic to create a buzz around their upcoming movie. Nike came up with "Believe in something. Even if it means sacrificing everything." campaign that had Colin Kaepernick who was outcast from NFL as he kneeled during National Anthem to protest against racial inequality in NFL. The ad was a huge success, and Nike's sales rose by 31%. The UN's Women's "Auto-complete truth" was a huge success as a campaign, and garnered huge accolades from media houses. Here, it focused on gender gap and how it was perceived that some roles could never be donned by women. Not all campaigns end in success. Zomato gathered a lot of backlash in its subtle advertising campaign where they used Indian slangs in their banners put up at public places. Starbucks red-cup campaign. It created a huge buzz, and boosted sales, but it drove away a portion of Christian customers, who were offended by it.

In the end, we can say that controversial marketing is a double-edged sword. On one side, it benefits the firm by increasing its reach to the masses, and making more people conscious about the brand; on the other, it puts the brand value itself at stake. So, it has to be carefully planned, and a backup measure should always be kept ready to reduce the impact in case it backfires. Every such campaign should be thoroughly weighed in for the losses and benefits before execution.

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BlackcofferWhat We ThinkHealthcare Coronavirus: Impact on the Hospitality Industry

By Ajay Bidyarth - April 28, 2020 6275

Before jumping on the topic I would like to give an overview of what is Coronavirus, Covid-19, how it spreads, and its symptoms.

Coronavirus – Coronavirus is a large family of viruses that may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease Covid-19.

COVID-19 – Covid-19 is infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.

How it spreads – People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales.

Symptoms – Cough, fever, tiredness, aches, pains, nasal congestion, runny nose, sore throat or diarrhea, and difficulty breathing (severe cases).

#### Coronavirus impact on the Hospitality industry

Waitresses, hotel housekeepers, and casino dealers are among the more than 15 million hospitality jobs in U.S. cities at risk from restrictions being put in place to deal with the spread of Covid-19. Bureau of Labor Statistics data through May 2018 covering 40 occupations critical to America's hospitality and gaming industries. Restaurant, Hotel, and Casino Jobs Face Virus Risk

Hospitality workers as a share of each metro area's workforce (circles sized by total hospitality jobs). As of 20 April 2020 at least 23 states have closed bars or restaurants, around 20 have prohibited gatherings of more than 50 people, and several have begun implementing curfews and shuttering non-essential businesses. The most extreme measures have occurred in California where a shelter-in-place directive was announced by Gov. Gavin Newsom on Thursday. The order requires 40 million California residents to remain at home except for essential activities or jobs. In addition to critical government and healthcare roles, cafes and restaurants are allowed to stay open but only for take-out or delivery, which has already led to mass layoffs.

Nowhere are there more threatened jobs than in the New York metro area, where one million people work in hospitality. This includes 157,000 waiters and waitresses, 40,000 bartenders, and 8,500 hotel desk clerks. On 20 April 2020, Gov. Andrew Cuomo ordered all non-essential workers to remain at home for the foreseeable future. The Los Angeles area has the second-most such workers—around 800,000—including 22,000 people who work at amusement parks and recreation facilities. This represents between 11% to 13% of these cities' respective workforces in recent years.

#### Most Hospitality Jobs

There are 4.6 million hospitality workers in the top city clusters

New York  
1013630

San Francisco  
289990

Philadelphia  
302800

Houston  
346520

Washington  
347900

The pain of an extensive and prolonged coronavirus-related shutdown will be especially felt in the nation's tourism hotspots. Roughly one in four workers in beach destinations like Kahului, on the island of Maui in Hawaii, and Myrtle Beach, South Carolina are employed in the hospitality sector. The same goes for gambling towns like Atlantic City and Las Vegas, where the governor of Nevada recently announced a 30-day shutdown of all casinos.

#### Most Reliant on Hospitality Sector

The hospitality industry matters most in beach and gambling destinations

Metropolitan area  
Hospitality Jobs

Las Vegas  
241480

Myrtle Beach  
39170

Salisbury  
28070

Wilmington  
22170

Atlantic City  
30210

All but five of the 40 occupations in this analysis fall into broad categories that were less likely than the workforce overall to work from home on average in 2018, according to the BLS American Time Use Survey. Additionally, 17 of the roles, including restaurant wait staff and table game dealers, require at least arm's-length contact with others, based on physical proximity scores compiled by the O\*NET database of occupational information. At a time when most major cities are urging residents to stay at home and practice social distancing, few jobs are more at risk than these.

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Blackcoffer BFSI Securities and Capital Markets What We Think Coronavirus impact on energy markets

By Ajay Bidyarthi - April 28, 2020 6386

As the coronavirus spreads around the world and countries implement containment measures, energy supply and demand is being disrupted. The impact that country-wide lockdowns and demand slowdowns will have on energy markets will be evolving every day.

Impact on energy markets are:

i)Slump in wind expansion may support German power prices:

The recent slump in German wind capacity is likely to continue this year as complicated regulations and weaknesses in the global economic outlook due to the coronavirus are likely to dampen investment in the renewable technology.

This has the potential to restrict future additions to wind output, impacting supply and, in turn, supporting power prices.

ii)Chinese industrial gas demand remains weak in March:

Chinese natural gas demand from the industrial sector in March was down by almost 25% year on year, according to the Chongqing Gas and Petroleum Exchange released over Easter, as the impact of the coronavirus continued to weigh on consumption.

iii)Reduced energy offtake likely to hit UK suppliers:

A growing number of British energy suppliers could be at risk of collapsing through reduced energy offtake and cash-flow constraints amid the coronavirus pandemic, according to industry sources polled by ICIS.

iv)Breakdown of European power demand impact :

Power consumption continued to soften across key European demand centres through March and the first week of April, while less stringent measures and colder weather has sheltered other parts of Europe.

v)Brexit set to ensure EU 2020 renewable goals:

While the coronavirus outbreak is already having a significant impact on the European renewables sector, one unintended consequence of the pandemic is likely to be the achievement of EU and member state binding renewable energy targets for 2020. This is due to the consequences of a prolonged downturn in demand, which will not be normalized for by the EU's official statistics office (Eurostat), meaning that renewables look set to make up a higher share of consumption in 2020 across the EU.

vi)Spanish prices stay bearish but premium to France to persist:

Spanish power prices across the curve are expected to maintain a bearish trajectory throughout the nationwide coronavirus lockdown period which was recently extended until 26 April, with further extensions possible.

Nevertheless, forecasts for below-average wind generation would support Spanish spot prices, allowing France to continue exporting power to Spain. This in turn should keep Spanish near-curve contracts at a premium to their French equivalents.

vii)Coronavirus hits truck-loaded LNG demand:

Market sources have indicated the coronavirus has reduced demand for truck-loaded LNG around Europe, as countries have implemented lockdown measures and low oil prices have made gas less competitive as a transport fuel. Data from terminals in northwest Europe shows the impact has not been as significant as originally thought.

viii)Europe has found a coronavirus electricity demand floor:

Electricity consumption has leveled out in Germany, France and Italy, after falling for several weeks due to restrictions aimed at stemming the spread of the coronavirus.

But in Great Britain and Spain, demand has continued to drop week on week in recent days, according to an ICIS model that controls for the impact of temperature across Europe's five largest consumers of electricity.

ix)European power and carbon markets affected by COVID-19 – an early impact assessment:

In order to assess the fundamental impact of COVID-19 on European power and carbon markets we modelled a scenario

io in which we accounted for the first data on dropping electricity demand as well as assumed industry producti on cuts and continued travel restrictions.

x)India defers on LNG cargoes as lockdown ramps up:

India buyers are deferring LNG cargoes as ports close operations with strict lockdowns in place. This is a conc ern for sellers in a long market with India one of the key buyers.

xi)EU to reach 2020 renewables goals on coronavirus, Brexit:

The combination of Brexit and lower demand associated with the coronavirus pandemic should enable the EU as a w hole as well as many member states to reach their 2020 renewable targets, according to ICIS model run.

xii)European power markets yet to hit coronavirus demand floor:

European power demand will continue to drop as governments escalate measures to stem the spread of the coronavi rus.

Electricity consumption in Italy and France fell 16% below expectations over the past seven days, according to an ICIS model that controls for the impact of temperatures.

Three other major power markets studied by ICIS – Germany, Spain and the UK – have seen smaller drops, although all are trending down.

xiii)Virus demand hit to wipe 9% off 2020 European power prices:

- Power demand drop likely
- ICIS model indicates 6% drop in demand during 2020
- Price fall of 9% across Europe

A scenario where power demand drops one-tenth through up to June as a result of measures taken to slow the spre ad of the coronavirus would see power prices across European markets fall by an average 9% in 2020.

xiv)Weather-driven NBP prompt upside possible in week 13:

- Temperatures across NW Europe to tumble in week 14
- British local distribution zone demand to increase
- EAX-NBP premium gaining

Incoming cooler weather across Britain for week 14 could encourage buying across NBP prompt and near curve cont racts in the coming sessions. The drop in temperatures will likely trigger a spike in heating demand which has also increased due to large numbers of people working from home to curb the spread of the coronavirus.

xv)Southeast Europe braced for falling demand, bankruptcies:

Eastern European and Turkish energy companies are braced for sharp drops in demand and potential bankruptcies as countries introduce emergency measures in a bid to contain the coronavirus outbreak.

Although the spread of the virus is not as extensive in this region as in Italy or Spain, the impact of the eme rgency measures that have been taken is likely to be felt acutely because national economies are fragile.

xvi)Europe on course for sharp reduction to power demand:

Power sector demand across key European countries is set for a major slump over the coming weeks as countries scale-up their efforts to tackle the spread of the coronavirus.

Demand in Italy, which has been hit the hardest by the outbreak, has dropped 10% compared to its five-year aver age for March during the second week of its nationwide lockdown.

As measures to tackle the spread of the virus intensifies across other European countries, a similar drop in de mand can be expected, although changes are unlikely to be uniform.

xvii)China's city gas demand steady despite coronavirus, uncertain elsewhere:

The impact of the coronavirus in China has reduced but gas demand will still end March well down from 2019. Cit y-gate gas demand has been firm but the outlook for other sectors remains a concern.

xix)European gas centres set for April demand destruction:

- EU-wide demand crunch could follow after lockdowns intensify
- Residential demand to see brief increase before falling on warmer temperatures
- LNG sellers could struggle to deliver into Europe

xx)Coronavirus effects to ripple in Mexico:

Mexico's economy has perhaps never been more exposed to the global supply chains and commodity markets hit by t he shocks of the coronavirus and the oil price war, but its president is losing time engaging in denial and pol itical pandering. These will not help his party's 2021 election prospects if the country's economic performance falls further as its currency takes a beating amid capital flight.

xxi)China's gas demand rebounds – satellite data:

Emissions of nitrogen dioxide are on the rise in China. This is an indication that economic activity is rising as businesses and industry ramp up activity with the coronavirus impact subsiding.

xxii)Spanish virus to impact LNG imports:

Spain is home to one third of Europe's LNG import capacity, so a lockdown has the potential to further gum up t he global LNG supply chain if, as seems likely, it leads to a drop in demand for gas and a reduced ability to s upport scheduled imports.

xxiii)European nuclear plant operators gear up to ensure power supply:

European nuclear power availability is expected to remain robust with strict safety measures already being impl emented by the major plant operators amid the coronavirus outbreak.

xxiv)Bulgarian power traders call for nuclear maintenance change:

Bulgaria's free energy market association ASEP has called for measures to tackle national power market disrupti on due to the coronavirus outbreak on 16 March.

xxv)Global market moves feed energy downside jitters:

Heightened concerns surrounding the economic fall-out from the coronavirus is set to further weigh on European energy markets, traders say.

xxvi)Coronavirus likely to lower trader appetite for risk:

Widespread remote working due to the coronavirus is set to hit European natural gas and power liquidity, accord ing to traders.

A number of firms have already asked traders to work from home or are expected to do so.

While some trading activities around gas and power dispatching need to be done from a trading floor, most other tasks can be done from home.

However, traders indicated it is unlikely to be business as normal with participants increasingly risk averse a way from an office environment.

xxvii)Italian gas demand plunges on coronavirus restrictions:

The coronavirus outbreak took a toll on Italian gas demand in week 11 as the government extended nationwide res trictions against the spread of the virus.

If restrictions continue, demand and gas prices are likely to fall further as warmer temperatures follow spring , pressuring consumption for heating. Power prices are also expected to plunge on the back of weaker gas. Gas is Italy's main source for power generation and the marginal fuel, therefore a price maker for Italian power.

xxviii)Expect weakness in Chinese summer gas demand:

- Coronavirus impact on LPG to worsen
- China's big three will have sought some LNG volume deferrals as another means by which to deal with the mount ing oversupply

• Incremental demand for gas and LNG this summer will be unusually low

xxix)Coronavirus fails to pull down Italian power demand significantly:

The Italian wholesale electricity market has so far avoided major losses following the outbreak of the Coronavi

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By Ajay Bidyarth - April 28, 2020 6231

From Alibaba to Ping An and Google to Ford, companies around the globe are telling staff to figure from directly from home in a bid to stem the spread of COVID-19. Such remote functioning at scale is unprecedented and can leave a long-lasting impression on the way people live and work for several years to return. China, which felt the primary impact of the pandemic, was an early mover during this space. As home to a number of the world's largest firms, it offers lessons for people who are just commencing to embrace the shift. Working from home skyrocketed in China within the wake of the COVID-19 crisis as companies told their employees to remain home. Around 200 million people were working remotely by the tip of the Chinese New Year holiday. While this arrangement has some benefits, like avoiding long commutes, many employees and firms found it challenging. One employee at a web company quipped his workday changed from '996' to '007,' meaning from nine to nine, 6 days every week, to all or any the time. On the private front, employees found it difficult to manage kids' home-schooling via video conference while coordinating with remote colleagues. At an organization level, many felt that productivity rapidly tailed off if not managed properly. If done right, remote working can boost productivity and morale; done badly, it can breed inefficiency, damage work relationships, and demotivate employees. These kind of things are happening due to the impacts of COVID-19 on the world of work  
Here are a few of the learnings from China that will be applicable around the world, looking at the circumstances:

## Designing an effective structure due to the impacts of COVID-19 on the world of work

Teams or whole business units working remotely can quickly end in confusion and a scarcity of clarity. Being isolated ends up in uncertainty about who to speak to on specific issues and the way and when to approach them, resulting in hold-ups and delays. That's why establishing a structure and architecture for deciding and effective communication is vital. Here, smaller cross-functional teams are helpful, each with a transparent mission and reporting line, where directions and tasks are easy to implement. This also simplifies onboarding new hires, who can integrate faster in a very tight-knit group, at a time when the broad sweep of the organization isn't visible or easy to feel. With fewer in each team, there's longer to urge to understand one another and build the trust that will grow more organically within the office. At Ping An Insurance, workers are typically grouped in project teams of, at most, 30 members, while larger business units are divided to assist them to stay agile. Strong company-wide foundations underpin this, like having a typical purpose and unified goals. Providing clarity on what decisions to escalate and which of them is tackled at the team level helps drive progress. To mitigate the consequences of closed retail stores, one leading fashion company founded a technique room and redeployed staff into four cross-functional squads to support its front-line. It designed standard ways for live broadcasting and established internal best practices to encourage front-line staff to use new retail tools to drive sales remotely.

The lesson: putting in small, cross-functional teams with clear objectives and a typical purpose keeps everyone on the identical strategic course.

## Leading from afar due to impacts of COVID-19 on the world of work

Managing people is one of the foremost difficult elements of remote working, not least because everyone will respond differently to the cultural shift and challenges of the home-working environment. Leaders have to energize the entire company by setting a transparent direction and communicating it effectively. Offering a powerful vision and a sensible outlook can have a strong effect on motivation across the organization. It's essential to foster an outcome-driven culture that empowers and holds teams answerable for getting things done while encouraging open, honest, and productive communication. Empowering your team in this way pays dividends. WeSure, a part of leading internet company Tencent, assembled a COVID-19 response team<sup>5</sup> at the beginning of the year to supply amount, freed from charge to front-line medical workers.

Alan Lau, CEO of WeSure, credited his team, saying that they had worked nonstop, many from remote locations while inactive during the Chinese New Year break, demonstrating how responsive they were to the vision. For managers, the challenge is to guide, inspire, and direct their team in their daily course of labor, while being physically remote. Upping the amount of interaction can even work well here. One chief information officer, responding to a McKinsey survey, said he's texting the whole company with regular updates because it's a more human way of communicating than via the official corporate channels. When working within distributed teams, e-commerce giant Alibaba increases the frequency of its one-to-one communications with employees to a weekly basis and, in some teams, members submit a weekly report for his or her colleagues, complete with plans for the week ahead. Alibaba's productivity app DingTalk (Ding Ding) has features inbuilt to facilitate this by allowing managers to send voice-to-text messages to their teams, and to test in on progress.

The lesson: Determining how you communicate is simply as important as what's being said, and it has to be done confidently, consistently, and reliably

## Instilling a caring culture

As companies transition to the new normal, it's important to acknowledge that some employees are also facing other pressures reception, including caring for his or her children when schools are shut, resulting in feelings of isolation and insecurity. Business leaders must respect and address these additional needs. Empathy may be a crucial tool here, offering how to attach, promote inclusiveness, and make a way of community in a very barren of physical interaction. Increasing social interactions within the team, particularly through one-on-one catch-up, guards against feelings of isolation and demoralization and creates space for people to talk up and share their thoughts. By creating a way of psychological safety for his or her colleagues, being inclusive in deciding, and offering perspective in challenging moments, managers can stay closer to what's occurring, surface issues, and help their teams solve problems effectively. A similar approach is very important when coping with customers and clients, providing valuable stability and enabling them to navigate unknown waters confidently. As an example, one global bank asked their relationship managers to attach with small-business customers via WeChat and video calls to know their situation and help them weather the crisis. To try and do so effectively at scale, the managers are supported through dedicated product programs, online articles, scripts for communicating with clients, and internal training. Inclusion is that the ultimate show of empathy. Creating outlets for sharing best practices, success stories, challenges, and water-cooler chat are significant to making a person's connection. Giving employees space to pursue personal or social endeavors, providing a transparent span of control, and assigning meaningful tasks also can spur motivation.

The lesson: Connecting on a private level and instilling empathy within the culture is doubly important when working remotely.

## Finding a new routine

Moving to remote working risks disrupting the office-based flows and rhythms and it will be easy to hit the incorrect note or miss important virtual meetings thanks to packed schedules. Spend time along with your team addressing the nuts and bolts of how you'll work together. Cover the daily rhythm, individual constraints, and specific norms you'll decide to and anticipate what might get it wrong and the way you'll mitigate it. How companies plan and review their workflows has to change to reflect this. The challenges of the new working pattern and of not being in one room together will be overcome by creating a digitally facilitated cadence of meetings. One leading insurance firm adopted agile practices across its teams, with a daily and weekly ritual of check-ins, sprint planning, and review sessions. As Alibaba embraced remote working, it also made sure its meetings were more tightly run. One person is assigned to trace time and manage the outcomes. Team members can rate a meeting's usefulness by employing a five-star system that gives immediate feedback and positive ways forward. To address the challenge of launching a digital business with an oversized remote team, one company created a replacement workflow for product requirements that clearly outlined the use of digital tools, roles, and responsibilities as requirements moved from ideation to validation to delivery stages. Reiteration of decision-making struct

ures like this isn't always necessary when people can communicate directly, but their absence will be keenly felt when remote working kicks in.

The lesson: Establishing robust working norms, workflows, and features of authority is critical, but only too easy to stint on.

### Adopting a test and learn the strategy

The final lesson: Being able to recognize what isn't working and changing it fast.

These are the impacts of COVID-19 on the world of work. Leadership teams that continuously learn actively identify best practices, and rapidly founded mechanisms to share ideas across the organization tend to be most successful within the future. R&D teams at one leading high-tech manufacturer created a productivity target for remote work by estimating their productivity hebdomadally relative to onsite work and identifying levers to enhance it. Within four weeks, they had progressed from 50 percent to 88 percent of their baseline. As China's workforce begins to return to offices, these lessons from a number of its leading companies help as an example of how-with the correct structure, culture, processes, and technology-working remotely can boost productivity and morale. Employees who spend less time traveling or commuting and have a much better work-life balance are likely to be happier, more motivated, and prepared to mobilize in extreme situations. Embracing remote working allows companies to define a brand new normal that drives productivity and employee satisfaction into the longer term. Alibaba launched TaoBao, by now the world's biggest e-commerce website, while the staff was working remotely on quarantine during the 2003 SARS outbreak. For Trip.com, an overseas working experiment in 20147 established the foundations for nice customer service and versatile working culture. Hence, bringing together all the weather can enable a brand new way of working that may make your company suited the future-whatever which will hold. These are policies that will mitigate the impacts of COVID-19 on the world of work

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What We Think Information Technology Marketers Marketing Marketing Drives Results With A Focus On Problems

By Ajay Bidyarthi - November 25, 2019 6396

When the British ruled India, many Indians accepted to work under their policy, and they did not try to rebel against the British for their presence in Indian lands; They recognized the benefits of British rule. What was the factor that made Indians accept the British government? The perception about British-policies (about trading, pay-scale, and positioning in the military) had been done through various marketing channels in such a way that it brainwashed people of the nation, and many were ready to accept the British. So the Marketing is like fire when smartly handled; it can destroy your enemies, but when not it can burn you.

Marketing is to design and develop a pathway from product or service to the customer through a product, price, place and promotion strategies. Marketing depends on a variety of parameters that can be classified broadly, boiling down to vital three. These are 'What type of customer are marketing team is focusing on (based on gender, age, location, customer-class) (W1)', 'What are Product Specification or Applications you need to bring in front of customer (W2)', 'What is your Product Promotion flow path (W3)', 'How much time it takes to convey product information to customer (H1)'. These criteria are what I call '3W1H' forms. These basics need to be taken care of while developing a marketing strategy for the upcoming product. However, are they enough? No. There is one more parameter called the Feedback mechanism (FM). Generally, machines use the feedback mechanism to check output generated is as per input is given or not and if it is not, the input is corrected to get the required output. When it comes to human beings, he/she is surrounded by multiple products daily through social media, TV advertising and so forth. Slight uncertainties on either side in observation can make a positive or negative impact on the product on the consumer's mind. In the feedback mechanism, the marketing team needs to answer only one question "What kind of product image built in the customer mind through promotional activities?" If the product image not built as per expectation, then management has to review and work on 3W1H, as discussed earlier. So let's elaborate how 3W1H approach works along with feedback mechanism.

Fig.1- 3W1H with FM process can target customer effectively

After deciding the customer range, you can work on other activities. Since the customer is conscious about purchasing the product and when the product promoted, the first thing the customer will check is its usefulness, and if his/her answer is 'Yes,' then the customer will start comparing with similar alternative products in the market. Therefore, one should present the product along with some unique thought and express the product in such a way that its image imprinted into the consumer mind. For example, the polio campaign in India. The government had taken the initiative to make India polio-free by spreading awareness through all types of social communication mediums, in which Television played a vital role. Legendary cinema actor 'Amitabh Bachchan' was selected as an ambassador for this campaign. Initially, the advertisement published in which Amitabh pleaded people for vaccinating the children within a fixed schedule. The advertisement circulated throughout the nation, and no stone was kept unturned by the government to make this campaign successful. However, much to the surprise, advertising failed miserably to attract a deprived community in polio booth. This promotion failure was because of non-consideration of the customer (W1) and how advertise impacted its application on the customer (W2)? So after analysing failure, experts recommended changes in their marketing campaign like, to focus on major customer (Here mainly village woman who generally spend their time in home by watching TV), type of impact on people (People who watched TV during that era, had an image of Amitabh as 'Angry young man'). So the campaign improved their advertising by bringing out the same angry Amitabh instead of his soft-image, which used in the earlier campaign. So in a very next polio campaign number of people in the polio booth suddenly increased and when feedback is taken from people about such a sudden change, they replied that we don't want to watch 'Amitabh sir' getting angry because of us.[i]

In W3, organisation must focus on what kind of channel use to attract the customer. Currently, there are a lot of platforms available by which you can market your product. The main agenda you should keep in mind is that how effectively you can engage the customer through marketing, at very first, if you make an impact on customer then only, he can show interest in your product. For example, changes in launching trailers of the upcoming films. Till 20th century Television and newspaper were crucial factors, but now along with television, marketing team take help of internet resources like YouTube, Facebook, introducing an article on the pre-trailer phenomenon. Increasing the range of promotional devices, broadcast formats and publishing platforms provide a broad range to promote the film and choosing right platform may lead to a massive hit in the box-office.

For the last factor (H1) time, the obvious question that comes to mind is that 'Is time for advertising matters?', While watching the TV when an advertisement appears, many times we change the channel instead of watching the whole ad or ignore it altogether. You do have an option of 'Skip ad' when you watch anything online, so one must decide how much time is required to deliver product information during its promotion? Delivering product information

in less time, may create the possibility that the customer will watch it so it can result in attracting more customers. So, the content will be the king in the marketing. However, as one must have guessed it, this will not work all the time. Other factors like the cost of the product, application range, type of customer can also affect the H1. For example, the customer would be more conscious while watching higher-priced product broadcast compare to the lower-priced one. So it would take more time for the marketing team to convince the customer to buy the expensive good than the lower-priced one.

After

implementing a marketing strategy as per 3W1H, we need to work on a feedback mechanism in which organization has to collect information about product image generated in customer's minds through dealers and using feedback-form. Not using the feedback mechanism may lead to failure in achieving 'product sales target' and can make the situation even worse. Take the example of 'THE TATA Nano-MAKING OF WORLD'S CHEAPEST CAR,' which was mind-blowing one-of-a-kind projects in Indian automobile industry. From the first phase of a marketing campaign, TATA Nano was on so much continuous limelight that this project was pleased by former American president Barack Obama.[ii]

The curiosity about the product was so high that the sale of then-leading

car model Maruti-800 was dropped by 20% immediately after unveiling the Nano.[iii]

However, while marketing the product, an organization built "Affordable, Garib Ki Car" image in customer's mind, which made customers conscious about what will be their status-quo in society after buying Nano? Thus, they started giving preference to two-wheelers over Nano. During the same time, some instances of Nanos catching fire came into focus, which worsened the situation.

This case even exacerbates when the team did not work on the feedback mechanism and hence, was not able to change customer perception about Nano. Later, when Nano fire problem was technically sorted out but even then, the marketing team did not make any impactful effort to market the improved safety of the car. Therefore, customer's negative perception remained stuck and the organization did not even come close to achieving selling figures of Nano. If the organization had used feedback mechanism, it would have been an entirely different story.

So

3W1H can be an essential factor while developing a marketing strategy for the product along with a reversible FM method. This method can help us to monitor Product marketing throughout the phases and can help the marketing team to change strategy whenever it goes into the wrong path.

[i]

<https://www.thehindu.com/news/cities/Delhi/when-amitabhs-voice-did-the-trick-to-make-india-polio-free/article6257123.ece>

[ii] <https://www.buisnessstoday.in/obamas-india-visit/nano-caches-worlds-most-powerful-mans-eyes/story/10144.html>

[iii] <https://www.buisnessstoday.in/obamas-india-visit/nano-caches-worlds-most-powerful-mans-eyes/story/10144.html>

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By Ajay Bidyarth - November 30, 2019 6748

The business of business is no longer to do just business or increase the bottom line to maximize shareholder value. Rather, the concept of business is moving towards a new dimension of sustainable business, the triple bottom line. People, planet, and profits are the core ideologies that are rooted in sustainable business. Sustainability is taken into account when companies want to create long-term value creation along with strategies that promote the longevity of the company. As corporate accountability rises, expectations and need for transparency among stakeholders increases therefore companies have started to recognize the need to be sustainable to stay alert and alive.

**Business**  
globalization that has happened over the previous few decades has made some companies more powerful than some national governments, making it easy for them to exploit inexpensive labor, plunder natural resources, causing severe impacts through pollution on the natural environment, human health, and biodiversity. Unfortunately for them, their horrible past has been catching up with them like in the case of child labor issues of IKEA & Nike, Rana Plaza accident in Bangladesh affecting Zara, H&M and other clothing brands, environment pollution by BP, Shell, Exxon Mobil etc. With the emergence of internet and social media these practices can no longer be covered up and silenced, the world has become more educated and less tolerant and therefore with every misdemeanor that is committed brand equity takes a hit. The media is fast picking up on cover-ups, half-truths, and bad corporate behavior and demanding accountability and transparency from corporates. Therefore to survive, companies are compelled to adopt sustainability and bring forth the rules for their suppliers as well.

Many of the irresponsible company practices and disasters that are witnessed in that last couple of decades were motivated solely by short-termism- the desire for instant gratification- and the appeal of short-term performance incentives. For instance, deferred maintenance and slack leadership were to blame for the 1984 leaks from the pesticide plant Union Carbide India Ltd in Bhopal. Estimates placed more than half a million casualties from the gas discharge of the plant. Finally, Union Carbide Corporation's 1989 litigation payout came out to today's equivalent of nearly one billion US dollars. Another example where the company was forced to shut down operations was Coca Cola at its Plachimada plant in Kerala. The local communities faced acute water shortage after the commissioning of the plant and the company authorities blatantly ignored the community woes. These businesses stated above didn't respect stakeholder engagement which ultimately lead to their untimely demise.

Today's issues cannot be solved without participation from all stakeholders, and companies with influence should be the torchbearers of change. They need to engage with regulators, communities, societies, suppliers, and NGOs for effective and desired outcomes. Issues where engagement are required include population growth; global middle-class growth; decline in ecosystems; water scarcity; food safety; material resource security; higher global energy demand; changes in geographic patterns of energy consumption; and increasing climate change regulatory interventions.

By actively pursuing the triple bottom line, the essential possibilities available are:  
save expenses  
by reducing environmental effects; motivate employees and decreased employee turnover;decrease risk

through engaging with stakeholders; create a reputation by improving environmental effectiveness ;

In order for companies to commit

to sustainability they should have the below objectives in place:

Strategy alignment and sustainability: management should ensure alignment between the company's strategy and its sustainability initiatives. Sometimes, there is a divergence between the two concepts making sustainability attempts to look fragile and lacking real dedication and prioritization. For example, Toyota is well known for hybrid engine development, but less so for decreasing its reliance on rare earth minerals. Toyota decreased its dependence on imports and operational risk, thus reducing its economic hazards in the event of price rises. Compliance first, then competitive advantage: Compliance must be addressed first and foremost by businesses, which often involves laws on waste management, pollution, and energy efficiency as well as human rights and labor accountability. Recent reports show that investors are shying away from compliance hazards progressively. Reactive to proactive: As a result of a crisis, many of today's leading sustainability businesses such as Nike, Coca-Cola, Telenor, IKEA, Siemens, and Nestlé have stepped up mainly. For instance, in locations like Indonesia throughout the 90s, Nike confronted boycotts and government anger for abusive labor practices but turned the tide around. It became a pioneer in the establishment of transparency in 2005 by releasing a full list of the factories with which it contracts and a comprehensive 108-page report revealing conditions and payment in its factories. It also recognized huge problems, especially in its factories in South Asia. These businesses have all created more proactive sustainability approaches by acknowledging the effect of sustainability in a crisis.

Quantify,

including the company situation:

all businesses are struggling to quantify their sustainability investment returns. This is a straightforward problem with respect to compliance.

Transparency

is a precondition for assessing and enhancing sustainability practices. The only way for companies to achieve transparency is through open communication with all key stakeholders based on high levels of information disclosure, clarity, and accuracy as well as an openness to recognize faults and improve practices.

Sustainability -triple bottom line- can drive a company's achievement beyond shareholder value creation by building corporate shared value at its core and help in addressing social &environmental problems. Several investors today use ESG metrics to evaluate the ethical effect and sustainability practices of an organization. Investors are looking at variables like the carbon footprint of a company, water use, community development efforts, and diversity board before investing. Companies have started responding to investors by publishing their annual sustainability reports. Research indicates that businesses with elevated ESG scores have reduced debt and equity costs and that sustainability projects can contribute to improving economic efficiency while encouraging government assistance. It's only a matter of time, the flow of sustainability nourishes businesses in achieving holistic development for the environment, people and its profits.

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By Ajay Bidyarth - March 30, 2020 6812

The outbreak of coronavirus disease 2019 (COVID-19) has created a global health crisis that has had a deep impact on the way we perceive our world and our everyday lives. Not only the rate of contagion and patterns of transmission threatens our sense of agency, but the safety measures put in place to contain the spread of the virus also require social distancing by refraining from doing what is inherently human, which is to find solace in the company of others. Within this context of physical threat, social and physical distancing, as well as public alarm, what has been (and can be) the role of the different mass media channels in our lives on individual, social and societal levels? Mass media have long been recognized as powerful forces shaping how we experience the world and ourselves. This recognition is accompanied by a growing volume of research, that closely follows the footsteps of technological transformations (e.g. radio, movies, television, the internet, mobiles) and the zeitgeist (e.g. cold war, 9/11, climate change) in an attempt to map mass media major impacts on how we perceive ourselves, both as individuals and citizens. Are media (broadcast and digital) still able to convey a sense of unity reaching large audiences, or are messages lost in the noisy crowd of mass self-communication? Do social media provide solace or grounds for misinformation, (de)humanization, and discrimination? Can we harness the flexibility and ubiquity of media technologies to increase the public's adherence to the safety measures suggested by global health organizations to combat the spread of COVID-19? How can different media industries and channels for mass communication promote adaptive responses to foster positive health attitudes and adherence to preventive measures? How media impact the dynamics in the private domain (e.g. strengthen family bonds versus domestic conflict and violence)?

#### Coronavirus Disease (COVID-19) Effect

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By Ajay Bidyarth - March 30, 2020 6156

Is there any evidence about whether fabric or bare hands would spread covid-19 more from one surface to another? (e.g. opening a door using a fabric glove). Assuming the fabric doesn't touch your face, like bare hands easily do, even with efforts to remember not to people struggle to remember. I've been thinking of prompts to prevent face touching, such as wearing fabric gloves when out and about, but I don't want to promote this unless the fabric is at-least-no-worse than hands for transferring the virus between surfaces.

I'm talking about use in the community for instance when people have to travel or go to food shops, not in a healthcare context. The gloves should be changed between different settings (e.g. apartment block, bus, shop – switch to a new pair of gloves for each). The gloves should be ironed hot at the end of each day.

As far as I can tell from my attempts searching, this is evidence-based, but I'm keen to know from someone who is better at interpreting evidence in this field if it is sensible.

Use fabric gloves to avoid spreading of Coronavirus from outside every person going out for daily work touching every were using these gloves before entering the house remove the glove outside the home and clean hand with s anitizer to kill the virus. Use of this glove to wash with sanitizer and bowling in water about 60 to 70c is put outside the home for drying in night time morning these gloves are used. Any time you go outside and come back come do this is the better way to avoid spreading of Coronavirus.

Well, the risk of conducting covid19 by using gloves or not the same but the gloves remember us not to touch our eyes, mouth, and nose so don't get infection properly if you contact an infected patient, at that time wearing gloves become a must.

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By Ajay Bidyarth - March 30, 2020 6508

Why is there a severe immunological and inflammatory explosion in those affected by arms covid-19? are these only genetic causes related to the immune response of il6 and macrophages, or would other types of scenarios be related to some environmental element?

il-6 is a marker for macrophages, as an essential and pre-inflammatory marker, but my question is not directed at that already known factor, but what I am asking is the reason for such a brutal response by the immune system.

For example, here in Spain one of the parallel treatments is the administration of corticosteroids and anti-inflammatory drugs.

And another of the most worrying markers in patients is the increase in ferritin, or that its values are out of range.

The exacerbated response of the immune system, specifically il-6, which in addition to being pre-inflammatory, also has an anti-inflammatory function, depending on which synergies occur with its two types of receptors. R-il-6 and gp 130 this acts as an antagonist, these types of proteins are very typical in endothelial cells or in macrophages.

But my question is why this so severe call of il-6 and il-1 by those affected by covid-19.

Could it be that the virus's nexus protein had some synergy with R-il-6 binding to it and in this case, it was acting as an agonist,? and to act, making a call effect. I don't know.

My question is directed more at him, why? of that abrupt and exaggerated call. And in such a short time.

Could it have to do with the virus replication speed vs. slower activation speed of T and B lymphocytes?

In innate immunity, Monocytes in this case macrophages are cells that present il-6 in their cell membranes, but such a large amount ... of response.

It is as if the immune response is more associated with cellular damage (DAMP). Why?

Even soluble peptides like cathelicidins HDPs that react and are produced by cells of the epithelial tissue of the respiratory, digestive system or the skin itself, which are pro- and anti-inflammatory. and they also act as chemoattraction agents, pro-apoptosis in the case of epithelial cells and anti-apoptotic in the case of neutrophils, they are one more barrier of the innate immune system, yes, but to such an extent of producing that inflammation so severe, and that cell death in such a short time?

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By Ajay Bidyarth - March 30, 2020 6416

What we can learn, is to have frequent updates to our pandemic simulations, then the simulation that shuts down the pandemic the quickest, institute immediately!

The USA has known for two years, what the implications of the virus are going to be, because in 2018, the John Hopkins Center for Health Security ran a simulation called “Parainfluenza Clade X” to determine what the potential would be of a virus pandemic, and they concluded: “...twenty months 150 million people worldwide—two percent of the global population—have died.”

“...The global economy has collapsed under the strain, with the Dow Jones average down 90 percent. U.S. GDP down 50 percent, and unemployment at 20 percent. Washington is barely functioning—the president and vice president are both ill, one-third of Congress is dead or incapacitated.

“ People involved in that simulation were Tom Daschle (former leader of US Senate), Dr. Julie Gerberding (former head CDC), Jim Talent (former Missouri senator)—Why are all of these people keeping quiet right now, and not telling us what they saw in the global virus pandemic simulation only two years ago, and helping lead us out of this mess, with some new simulations??!!

The most important lesson to learn is that you always need to keep a spare ventilator in your garage. Your local hospital might run out just when you need one.

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By Ajay Bidyarth - March 30, 2020 6046

Since the creation of the EU, we have been through many challenges worst than public health issues. Human suffering and loss of life are always distressing, but member-states have done what they could to curb the spread of infection via the established partition of state boundaries, as well as internally – isolating critical cities and regions.

To people living outside the EU, it may seem strange and self-serving, when actually it is not, as the EU is not a unified federal entity with one government, legislation, language and an army.

We are however a Christian alliance, although we tolerate other religions too.

As we are still in a process of achieving closer integration, in some cases, national law still supersedes supranational (EU) law.

As each member-state participates in the EU based first on the citizenship identity of its people, it makes sense that a risk for public health involving contagion would have to be managed on a national basis.

This approach also solves language-barriers in hospitals and is more economical for each patient involved.

By no means does it mean that cooperation between member-states has stalled, or ceased. Our unity is not challenged.

Simply, we are all in need of the same resources.

There are not many companies in the EU that can produce extempore the necessary PPEs. Some restructuring of theirs and other companies' modus operandi is needed, but I have every confidence that we will adjust.

Shortages in the human sector (i.e. medical personnel) are more difficult to tackle.

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By Ajay Bidyarthi - April 10, 2020 10687

Before jumping to the pros and cons of industrial revolution 4.0, it is important to understand industrial revolution 4.0. Industrial Revolution 4.0: Industrial revolution 4.0 is the term that is used to describe the transition from an electronic-based industry to the one that is dominated by the fusion of new and emerging fields and ideas like Artificial Intelligence, robotics, and green energy, etc.

'Industry 4.0', is the era of digitalization. The term originated from Hanover Messe 2011 and was incorporated in German high-tech strategy. Much is attributed to Klaus Schwab, a German engineer who founded the World Economic Forum. Two years later, the Industry 4.0 Platform (central network for digital transformation) was set up to make it work. It is characterized by 4 physical and digital trends: 1 Autonomous motor vehicles (cars, trucks, drones, aircraft, water vessels); 2 3D printing (medical implants); 3 Advanced robotics (Agri to health care); 4 New materials (graphene).

Benefits: Some of the benefits are as follows

It helps relieve poverty and improve people standard of living

With artificial intelligence and fast-paced internet like 5G, there will be better diagnosis, cheaper and better medical services.

The emergence of new and innovative technologies helps better undertake better security, surveillance and search and rescue operations.

India has currently announced a new drone policy that allows for efficient security, traffic, and mapping.

It will help connect every last village in the country to ensure better government services and improved infrastructure for all.

Artificial intelligence will play a significant role in changing the lives of specially-abled able.

It promotes ease of doing business and ease of living.

The improved early warning systems weather forecasting systems etc. and assure improved disaster management reduce of causality, faster evacuations.

The improvement in fields of biotechnology, AI, pest control mechanism, innovative irrigation system, etc. allows for increased crop production.

Pros and cons of industrial revolution 4.0

PROS

CONS

Industry 4.0 helps us to improve operational performance and efficiency. With minimum machine downtimes, we can produce more and faster while allocating resources more cost-effectively and efficiently.

Data security issues are one of the main concerns for the manufacturers as they believe investing in smart factories may increase the risk of security breaches and the chance of proprietary production knowledge theft.

Since most of the production processes are automated, high-quality standards can be maintained at a lower manufacturing cost.

Technical glitches loss of high-paying jobs and resistance from stakeholders to invest in new technologies are few entry-level barriers towards industry 4.0.

It can also enhance flexibility, speed to market, and agility for launching new products and services. It is easier to scale production up or down in a smart factory with minimum modifications.

Social issues and their impact on society are a few of the notable cons. Earlier industrial revolutions as they went through made Huge changes in social terms. There was a lot of urbanization and industrialization. There is uncertainty as to how things will shape up now.

Industry 4.0 presents an opportunity to improve customer experience and service by reducing resolution time, fewer defects, and offers more product choices to the customers.

Interoperability, information transparency, automation, and integration of the production process are a few critical changes lying ahead for all the existing manufacturers.

It makes compliance easier – complying with regulations in industries like pharmaceutical and medical device manufacturing does not have to be a manual process. Instead, industry 4.0 technologies make it possible to automate compliance including track and trace, quality inspections, serialization, data logging, etc. Skill education and training of manpower need to be improved and it takes a good chunk of investment.

Blackcoffer Insights 16: Harsh Gupta from PIBM, Pune

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title = soup.title.get_text()

# Find the article text
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# Print the results
print("Title: ", title)
print("Article: ", article)
with open("140.txt", "w", encoding="utf-8") as file:
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By Ajay Bidyarth - April 11, 2020 6370

India is on the verge of an unprecedented economic as well as humanitarian disaster from COVID-19. India is facing economic pressure due to the coronavirus outbreak. This outbreak has resulted in a steep slowdown in the Indian economy, whereby India's GDP has reduced by 4.5% as seen by current statistics. With COVID-19 being into the picture the Indian economy is going through a severe slowdown and on top of that multiple such problems hitting the world of work from many such directions. Companies and industries are finding it difficult to sustain in such an environment of the financial crisis. Industries are being urged to take up certain tough decisions like layoff, retrenchment, compulsive leave without pay and many alternative cost-effective methods to sustain the present economic crisis like cutting down the salaries, handing over the pink slip to employees and opting best possible. The sudden outbreak has presented new roadblocks for the Indian workforce and especially for the daily wage and contractual workers.

According to the latest economy forecast by the UN, the probability of countries entering into the recession an

d companies going bankrupt has increased and India is not likely to "remain decoupled" from the global meltdown. Lockdown across the country is causing significant disruption across multiple sectors including manufacturing, tourism, aviation, real estate, etc are the worst affected. Temporary lockdown resulting in the closing of shopping malls, has affected the Indian economy in a disastrous manner, adversely as a result of which consumption of essential items has reduced which in turn has given a terrible blow to the retail sector.

According to the statistics from the Economic Times of India, live event industries have seen an estimated loss of ₹3000 crores. A number of young startups have been affected as the funding has fallen and there would be a lack of investors in the market. The disruption of the economy is much starker and alarming than the global financial crisis of 2008, which hit the Indian financial sector. Besides that back in 2008 the Indian economy was much better placed to handle the crisis. According to the data in 2019 the GST collection was expected to be approximately 7.4 lakh crore while the government was only able to collect a total of 5.8 lakh crore that is a total loss of 1.6 lakh crore, the government also faced a setback in the income tax sector as the expected revenue to be collected was estimated to 5.2 lakh crore but the government faced a shortfall of 50,000 crores. The above discrepancies have resulted in insufficient funds with the government. Clearly the government does not have sufficient funds to provide relief to the people mainly the labor class, contractual workers and the people working on the basis of daily wages.

Other major industries whose figures of losses are alarming are the Hospitality and tourism industry which employs approx. 4 crore people. In the next 10-12 months it expects 12 lakh job losses which may act as a major factor in revenue loss and revenue losses of ₹11,000 crores. The aviation industry is worth ₹2.2 lakh crore, employing 3.5 lakh people, they expect a revenue loss of ₹4,200 crores just between April and June. India's retail industry is the total worth of ₹59 lakh crore employing around 4.6 crore people, if the pandemic crisis lasts 3 months further it expects 1.1 crore job losses. The restaurant industry employs 73 people, of whom 14%-15% may probably lose their job. The real estate industry is looking at an approximate 35%-40% job loss. Ride-hailing industries meaning Ola and Uber have approximately 5 million driver-partners, the crisis has led to a drop of 40%-50% in the business. These figures would get even more disturbing in the next few weeks as the country heads into total lockdown. Top car manufacturers like Honda, Hyundai have shut down their car productions. Many other such companies have shut down their production until further notice. This would again lead to more lay-offs. The stock market in India has also seen a breakdown since the lockdown

Quarantine and lockdowns have disrupted the chain supply across the whole world. As the trade between the countries has come to a halt, it has affected the global economy as well as the country's GDP. While some industries in India depend on other countries for their raw material, for example the electronics market, it depends on China majorly for its raw material, has seen a major setback as trade between the two countries trade has been seized.

The outbreak of the virus has placed tremendous responsibility in the hands of the government. The Reserve Bank of India (RBI) along with the government intends to implement below-mentioned measures to deal with the looming economic crisis such as:

The government under their "Jan Dhan Yojana" has opened 38 crore bank accounts that aim to make affordable access to financial services for the poorest population of India, even a direct transfer ₹5000 can reduce the distress of the poor immediately. Interest-free or low-interest bank loans must be provided for medium, small and micro enterprises for the next 4-5 months, which could give an immediate boost for the economy. Lowering tax to stimulate demand and place more money in the hands of the people and businesses is vital. RBI has provided 3 months moratorium would lessen the financial stress of the public at large

An Economic response task force was announced on 19 March 2020, led by the finance minister of India Nirmala Sitharaman, to tackle the financial crisis. As of announced on March 26, a \$ 23 billion dollar package for fighting the economic pandemic has been sanctioned. The spending proposed in the package would amount to about 0.5% of the estimated GDP, while the other countries have a package of about 4%-5% of its GDP.

Everywhere in the world, governments are recognizing that this is no time to worry about fiscal deficits. Instead, they have to do "whatever it takes" to come out of this extraordinary crisis. Immediate and necessary actions are indispensable not only from the Indian government but also from every individual to prevent this health pandemic from turning furthermore into an even greater economic disaster.

Blackcoffer Insights 16: - Aymaan Nasir Khan, Nowrosjee Wadia College Pune

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# Find the article text
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# Print the results
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print("Article: ", article)
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By Ajay Bidyarth - April 11, 2020 6535

The

corona outbreak has hit us hard. With the world economy suddenly coming to a standstill, the future seems more uncertain. The pandemic has shown its worst effect in the developed countries most.

The following figure depicts the most affected countries as of March 31, 2020- (Source: WHO)

However,

the cases in India are still low, with total active cases under 1,500 as of 1st April 2020, but the low number of tests performed remains a big issue of concern.

The

following map shows the affected states in India – (Source: Ministry of health and family welfare)

The

number may seem small, but if we closely have a look at the daily cases reported, then the situation seems more alarming with the growth looking more of exponential now.

The

number of cases no doubt are soon going to increase in the future, which is hard to predict right now. But the curve is expected to be flatter in case of India, as the lesson has been learnt from mistakes of countries like Italy and a nation has been kept under a lockdown.

This was a necessary step, no doubt, but it has raised more problems for an already slowdown hit country.

The Federation of Indian Chambers of Commerce and Industry (Ficci) said: "A significant 53 percent of Indian businesses indicate the marked impact of the coronavirus pandemic on business operations even at early stages." The tourism and travel industry has been hit most whose operations have almost come down to zero. The second most hit sector is manufacturing, and with a significant portion of the unorganized sector being employed there, the situation worsens. Healthcare and hygiene products like mouth masks, sanitizers, and handwash have become expensive due to excessive demand.

With the present ongoing situation, the followings things can be predicted:

The Medicines and Healthcare costs are expected to increase in the future as India imports 69% of the raw material of pharmaceutical drugs, and due to lockdown in both countries, the supply route has been fragmented drastically. This is also evident with the recent increase in common use medicines like Paracetamol, whose cost has gone up by 40% as per the latest CRISIL report. Industries depending on cheap labor could take a hit as such pandemics are more prone to populated countries, and the factory workers and unorganized sectors don't have access to healthcare benefits, so the cases might just shoot up drastically, and their attendance in the future will go down in the same rate inversely. Smartphones and electronics sales will be affected directly. In China the sale of smartphones is expected to go down by 50%, as stores are in lockdown for a long time, new launch events are getting postponed or canceled, and since China is the largest smartphone manufacturer in the world, with 1 out of every 4 smartphones shipped from China, this will affect us too. Similar is the case with electronics, whose parts and even whole units in many cases are manufactured by China. So their prices might rise in the future, maybe not immediately, but in the last quarter of the financial year. Lack of technology will incur a greater logistic cost of containing the coronavirus outbreaks in the case of India. China being the technology giant, took the help of technology to track and contain the coronavirus outbreak, but in our case where more than 80% of transactions are by hand, the cost and risk of containing the virus will be very high. The meat prices are dropping drastically due to stigma with losses reaching more than 1100 crores. This is an issue of serious concern for a country like India whose meat industry is 90% governed by the unorganized sector. The sectors which are going to get some serious hit are- Airlines, Tourism & Travel, Cruise, Share market, Leisure & Hospitality, Automobiles, and Product manufacturers due to negative sentiments and fear in the minds of common people. The sectors which will need to prove themselves are- Banking, Education, Healthcare and Manufacturing. A lot will depend on how they will react in the future.

The

Indian economy could react to corona crisis in 3 ways:

V-shaped: This is "classic" real economy shock, where output does get displaced, but growth eventually recovers. In this scenario, annual growth rates could fully absorb the shock. This was the case with the Canada post-2008 crisis where Canada maintained the credit flow and capital formation.

U-shaped: This scenario is worse than V- the shock persists, and even though the initial growth is resumed but there is some permanent loss of output. This was the case with the USA post-2008 crisis. This was led by a deep banking crisis that disturbed credit supply.

L-Shaped: This scenario is worst of all. Not only the growth rate declines, but the economy never recovers. The distance between the previous and new path keeps on widening with increased loss of output, leaving lasting structural damage to the economy.

With the recent cut of India's growth projections by Moody's and Fitch, the future indicates a deeper slowdown, if not recession. To come out of this pandemic cleanly and with lesser shocks, the government needs to set its priorities right- with prime focus right now on the medical and healthcare sector as the country is battling against the coronavirus, but along with that, the government should try to take along the lower sections of the society providing them monetary gains as they are the ones who are battling with the daily necessities along with the virus. In the long term, the government should keep an eye on the issue of liquidity to keep the cycle going.

But above all this, we as a responsible citizen should understand our duties and responsibilities towards the country and society and try to take our country out of this outbreak by doing our part.

Blackcoffer Insights 16:- Shubham Joshi, University Business School, Chandigarh

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## **COVID-19: INTRODUCTION**

The Novel Coronavirus (COVID-19),

Initially emerged in China at the end of 2019 and by the end of January 2020, The World Health Organization declared this pandemic as a Public Health Emergency of International Concern. This virus causes respiratory illness (like the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty in breathing or may cause lung disease. Senior Citizens or people under some medical treatment are more likely to acclimate to this virus.

The impact of this

outbreak is rapidly increasing at a higher rate than anything else in the economies of various countries of the world. This outbreak is considered a situation like recession or slowdown of the overall economy after the great recession in the year 2008.

India is the

fifth-largest economy in the world with a population of 133.92 Crores. India is still in its developing phase and its uneven development across regions and communities adds various complexities in coping up with this kind of pandemic. It also reflects that there is a huge scope for social schism among the people of different communities.

In India, the first

case was reported at the end of January month because people travel from China to India. The government of India made special arrangements for the students and people who were there in Wuhan for studies and work so that India can save their people from the effect of this novel coronavirus. The infection rate of this virus is relatively low in India as compared to its population size because of the rapid actions taken by the government to quarantine people and shut borders.

Also, the government

of India announces the suspension of various activities in the country like shut down of educational institutes and corporate houses, deferring all tourist visas and postal services, cease all the interstate and intrastate borders within the country, and terminate all the transportation facilities. The drive of social distancing and isolation of infected people also takes place.

The initiatives taken

by the government of India in accordance with this pandemic outbreak affect the economy in a very drastic way. It changes the way in which the country is developing. A lot of disruption is happening all around the nation which challenges the "unimaginably ambitious" aim of the Modi government for achieving "\$5 Trillion Economy" by 2024.

## **COVID-19: ECONOMIC IMPACT**

The Indian economy is

deemed as the fastest developing economies in the world. India has now emerged as a global preeminent player in the world's economies and at the third-largest economy in terms of purchasing power parity. It consists of numerous sectors or channels such as Hospitality, Education, Retail, E-Commerce, Aviation, Petroleum, Banking, Automobiles, Pharma or Healthcare, Insurance, and Railways, etc. which are going unfavourably influenced by this disruption and through which the economy is getting affected.

## **COVID-19: HOSPITALITY**

The Hotel industry of India has a very vast contribution towards India's Total Gross Domestic Product. It is the most prominent service sector with market size of \$22 Billion in 2019 & the proposed rate of growth by 8.6% till 2025 now becomes a challenge because of this pandemic. The intact turnover of the Indian hospitality sector was sunk between \$8.85 billion to \$10 billion which reflects depletion of 39% – 45% as correlated to last year's revenues. The hospitality sector needs to take proactive financial steps to mitigate the impact of COVID 19. It is wholly based on travel, trade, and tourism for its subsistence or existence. This extensive outbreak leads to huge cancellations of bookings in the last months' leads to the miserable position of hotels in the worrisome declines.

Hotels are

grappling from crisis amid stringent government restrictions and also emphasizing on isolation and social distancing. The impact is very huge and is unpredictable but the sector is at its maturity level and focusing on their hospitality commitment to and for the society in the best way they can. The big hotel chains in India propose their rooms and venues for free of cost or at very highly subsidized rates to the government for the purpose of quarantining people who came back from abroad and to the medical fraternity to use rooms as the isolation infirmaries. Also, the pantries are used for preparing feeds for the needy ones in a proper sanitized manner.

The industry

professionals have to keep an eye on their rivals to check their surviving policies at this consequence and they have to sustain their public image in the market after analysing the after-effects on their pricing and preservation of their assets. This industry may exceed after witnessing remarkable assurance in the economy.

## **COVID-19: EDUCATION**

Education is a pretty essential aspect

in an underdeveloped country like India. India's Education sector proposes a glorious opportunity to 29% of India's population which is between the ages of 0-14 years. There is a foreseen rise in India's higher education sector of Rs 2,44,824 crore by 2025 but as the occurrence of the Virus that's a troublesome challenge.

The COVID-19 outbreak has set off alarm

bells across the country for the 250 million school going students along with students enrolled in universities in India. India's education sector is not

unaffected, it has given shut down of school, Colleges and other institutions this is basically for social distancing to prevent the cause-effect of the spreading virus and be precaution beforehand of the disruption. India has resulted in 49.86% of the increase in internet penetration utilized to remit learning. So to permeate the pauses the virtual classes and online classes are catching the drift i.e. a merge turn to the digital learning platform.

In the wake of this dilemma and gripping the student safety in mind and their scholarly concern, most of the institutes have taken the action to accommodate the convenience of telecommunication, Skype call, zoom call and admittance to other virtual prospects to fill the gap of learning. The examinations are being suspended or postponed keeping the concerns of the burgeoning COVID-19 on the masses extensively in the consultation.

Undoubtedly, this is a very crucial time for students. Ironically, it has taken the COVID-19 outbreak to get the whole education sector to slip to digital mode and with both humanistic and technological support. The impact on education is likely to induce losses in terms of dropout rates and learning outcomes, especially in regions with low shock resilience.

#### COVID-19: TRAVEL & TOURISM

The Coronavirus outbreak had a debilitating influence on India's travel and tourism sector with the industry assessing an overall deterioration of ₹ 5 lakh crore with witnessing a 4-5 crore people job cuts. It was also scrutinized that online travel agencies were set to suffer as much as ₹ 4,312 crores, tour operators (inbound and domestic) ₹ 25,000 crores, adventure tour operators nearly ₹ 19,000 crores and cruise tourism ₹ 419 crores. This sector engages employment to the extensive segment of the civilization like miniature homestays and regular wage earners.

The time period from December to May is very crucial and important for this sector to attract its customers as people come from outside the country in this time span and also people within the country travel a lot to spend their summer holidays and also the people who travel abroad. According to ICC, Foreign Tourist Arrivals (FTA) has got fluff by about 67% seasonally in January-March, while for domestic tourists, the value is lower by almost 40%.

#### According to The World Economic Forum

(WEF), this pandemic is putting up to 50 million jobs in the global Travel and Tourism sector at risk and out of this, around 30 million would be in Asia. Indian Chamber of Commerce (ICC) counsels fixing up of a 'Travel & Tourism Stabilisation Fund' with direct gain transfer to each unit to prevent commercial loss and sequential job loss. It is presumed that it would take up to 10 months for the tourism sector to get back to its sustainable level.

Travel and Tourism sector bodies had communicated to the government for interim aid to pay EMIs, instalments, taxes, and salaries to operators as the tourism industry is eyeing destitution, cessation of industries and mass lay-off. The unskilled people of the industry are perceived as the most vulnerable link in the whole industry concatenation.

#### COVID-19: BANKING & FINANCIAL

The Indian Banking sector has an influential pivotal role in the development of an economy as it is considered a necessary service sector in society. India's banking sector is sufficiently capitalized and well regulated by the regulatory body The Reserve Bank of India (RBI). Currently, Indian banking and financial industry is at the fifth-largest in the world and has the potential to become third-largest by 2024 and contributing approx 7.7% towards the GDP of India. Although the banking and financial sector were previously suffering a lot and are on the struggling plank because of scams like Nirav Modi, VUCA disruptions like demonetization, the enlightenment of GST in the nation and now with this pandemic.

This disruption causes so many problems

to the retail as well as corporate customers. Indian Banking Association, said to bank customers that they should visit the bank branches only in the situation of extreme emergency. The Bank branch cut-offs the working hours in a day. Many branches were sanitized under the orders of the state government and the services are kept limited which are most essential in the branches. RBI asked customers to use digital platforms for most of the operations and banks are operating round-the-clock to assure all digital channels are up to date.

However, an appropriate fiscal policy response should be implemented to uplift the economy from drowsiness to a vigorous state. From boosting bank's liquidity to providing financial relief to its customers, RBI announced various guidelines to stabilize the concern of corporate houses as well as MSMEs and retail customers in the wake of this outbreak.

Banks are now being allowed for a three months moratorium on payment of instalments regarding all term loans prominent as on 01.03.2020. Also, the repayment schedule and tenure of such loans can be shifted by 3 months. Further to tackle financially this industry and its valuable customers the RBI also slashed the repo rate by 75 basis points.

#### COVID-19: CONCLUSION

The Government of India mobilized various committees or task force specifically for COVID-19 and National Disaster Management Authority (NDMA) to overcome from this pandemic. These committees are here to ensure a harmonized response against this outbreak. The government took all necessary steps to fight against the coronavirus such as introducing a new app for the population named as "AAROGYA SETU APP" which gives essential information about the virus. Such crises also heal the earth back to its natural state with fewer disruptions by humans. It could also be stated that such crises also seed some opportunities in the nation for the better development of the whole economy.

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By Ajay Bidyarth - April 12, 2020 6109

What is Coronavirus? Is it a disease? How it is spread to humans? How Coronavirus affects the world economy? Several questions come in mind when we talk about the Coronavirus. Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. These are a type of virus that creates sickness in humans. There are many different kinds, and some cause disease. A newly identified type has caused a recent outbreak of respiratory illness now called COVID-19. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. Coronaviruses vary significantly in the risk factors. Some can kill more than 30% of those infected and some are relatively harmless, such as the common cold. Coronaviruses cause colds with major symptoms, such as fever, and a sore throat from swollen adenoids, occurring primarily in the winter and early spring seasons. As it creates much chaos between humans and also affected the whole human diversity, it also creates a disturbance in the economy. The economy is the largest system of trade and industry by which the wealth of a country is made and used. If this economy will not work then the human race will also come to an end. So not only COVID-19 makes the humans sick but also it makes the economy a viral whole. The impact of coronavirus firstly affects Economic growth which is the factor that creates nation wealth. Economic growth creates wealth on a national scale for the government in the form of taxation, which is then redistributed accordingly to the services and communities that need it the most. Due to COVID-19 industrial production, sales and investment all fell in the first two months of the year which decline the whole economic growth. Such a slowdown in manufacturing industries has hurt countries that are interlinked to each other in terms of exports i.e. Asia Pacific economies, sub-Saharan economies and the USA economies. A reduction in global economic a

ctivity has lowered the demand for oil, taking oil prices to multi-year lows. This happens even before a disagreement on production cuts between OPEC and its allies caused the plunge in oil prices. Job creation and employment opportunities are the second most factor which was affected by coronavirus as it often requires the skills and some wilful hands which necessitate in the long term of the business. Longer lasting and more intensive outbreak have half growth the opportunities in 2020 as factories suspend their activity and workers stay at home to try to avoid the virus.

Poverty is the third and most important factor which is diversely affected by COVID-19 as employment is not there and everyone was ordered to stay at home. When people will be in their own houses then automatically poverty will increase complimenting the decrease in economic growth.

There is also a big shift in stock markets, where shares in companies are bought and sold, affected many investments by the investors and shareholders or individual savings accounts. Central banks in many countries, including India, have slashed interest rates. Supermarkets and online delivery services also have huge growth in demand as customers stockpile goods such as hand sanitizers, toilet paper, rice, and orange juice etc. as the pandemic escalates.

At last the COVID-19 normally called coronavirus affects the world economy in a much-disintegrated manner. Some economies in which there are many deaths due to coronavirus will take more time to recover as their economy has gone before 2 years back. The economy can only be revived if the government makes more strict measures and coronavirus can be cured by the vaccine.

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## Disruption in Fintech – The Lightning Network

Blockchain or the Distributed Ledger Technology has already been around for some time now. Cryptocurrencies like Bitcoin, based on the Blockchain technology, are making entry into the formal finance world and increasingly becoming a medium for exchange. Though there are many potential use cases for Cryptocurrencies and the Indian Government is very critical about implementing the technology in banking and finance, it still has a lot of issues to be resolved before we can commercially use it for transactions.

Some of the most important drawbacks of

Cryptocurrencies like Bitcoin right now are as below:

**Scalability:** Bitcoin can have <7 transactions per second as compared to ~47,000 via payment network giants like VisaThere is a block limit of 1MB, which amounts to 8GBs per 10 min on a Bitcoin block (to match 47,000 transactions per second). This essentially means that home computers cannot process this currently and it has very limited use cases with transactions requiring devices having the high computational power

**Centralization:** High computation power requirement would limit the usage of the network to only those who can afford itThis will eventually lead to fewer validations for the Distributed Ledger, defeating the whole purpose of using Blockchain. (A distributed ledger means that everyone in the network can validate the transaction between two parties)

So, it becomes important to have a cheaply available

validation mechanism that can be carried out using a basic broadband connection in-home/small business computers. If two people have personal transaction history, it's unimportant that it should be posted on the main blockchain every time a transaction takes place as it could bloat up the blockchain. Moreover, everyday transactions using cryptocurrency is not possible as the cost of posting a transaction for. Let's say buying a coffee, can be more than the price of coffee itself.

**Introducing The Lightning Network:**

Lightning Network is the latest disruptive technology being researched currently in Fintech to make cryptocurrencies scalable. It basically adds

an extra layer on top of the main Bitcoin Blockchain and enables payment channels between two parties over this layer. Micropayments for everyday transactions can be very easily carried out using this channel. Here is how it works:

Suppose A buys a coffee

from the nearby coffee shop B daily on her way to work. A and B decide to open a channel on the Blockchain for their everyday transactions. Once the channel (or the Lightning Network) is open, the two parties can keep a track of their daily transactions on this ledger. At the end of the month, with the ledger reflecting balances left with each party, they decide to close the channel. This final transaction is then recorded on the main Bitcoin Blockchain. This reduces the cost of the transaction and enables micropayments for everyday transactions. Micropayment channels can defer updating the main blockchain with remaining balances at a later date. A large network of micropayments can be created as a secondary layer on top of the main blockchain to address the scalability issue and reduce transaction fees. Although this solution is very much in the initial stages, resolving the scalability issue and reducing transaction fees by taking the transaction out of the main blockchain will give a big boost to the use of Cryptocurrencies.

How do payments take place on the lightning network?

The two parties exchange a single key for validation of their spend transactions. They can conduct an unlimited number of transactions on this channel and finally when one party closes the channel, the balances will be added to the blockchain.

Each

user can open a digital wallet to store Bitcoins and deposit some coins in it once the channel is opened (this money is kind of a security deposit on behalf of both the parties to honor their transaction)Once

they need to exchange money after their books are updated, they can sign off the ledger in the channelFinally,

this will be added to the blockchain once the channel is closed

The network is globally scalable since to reach any person through connected channels network, you just need to know the path to connect to that person through leveraging your existing network. Once the network develops in future, the requirement to open a separate channel too would cease to exist since the algorithm will automatically find the shortest route to connect to the person whom you want to pay based on the exhaustive peer to peer network. This would ease inter-country transactions and money can

be sent across internationally within seconds.

#### Limitations of the technology –

Since the channel for Lightning Network is separate and not connected with the main Blockchain, it will not be backed by the security of the original Blockchain. This can be a major concern for its widespread adoption and the companies should research extensively into this. Another challenge is its dependency on the internet. The Lightning Network is not capable of storing coins digitally in a hardware wallet. This makes it prone to hackers since the wallet will be available online. Also, transferring large amounts of money is something that needs further detailed research, since bigger payment might struggle with routing in the network.

Nevertheless, this technology is really fascinating and has a very broad usage through the implementation of Bitcoin and Distributed Ledger in everyday life. Once this is rolled out for customer experience, micropayments will be possible between two parties on Blockchain, just as we currently have wallets to transfer money for small purchases. The Lightning Network has a long way to go and is surely going to become the next big disruption in Fintech domain after Blockchain.

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By Ajay Bidyarthi - September 7, 2019 6729

Reconciling with the financial realities of an MBA education may come too late for many. There's a paper-thin or let's say "paper-money thin" difference between having a tight budget and being seriously stretched thin for money. Dangerously enough during the second month of my MBA, I was treading on the prospect of the latter. It struck me that I could find my savior in an uncle who lived in San Jose and was the type who always saved for a rainy day. With online payment avowedly ubiquitous and simple, it seemed like a no-brainer to me. One tap on an app and I would be rid of this predicament I had found myself in. Quickly enough, he initiated a fund transfer via Xoom, a PayPal service. I was dismayed to learn it would take all of three days for the money to finally reach me!

One would believe that in the era of globalization and high-speed internet payments would be fulfilled in a trice. But contrary to expectations, I learned that most cross-border payments are subject to numerous go-betweens and channels rendering them behindhand especially in some parts of the world. A complex series of interactions involving banks, merchants and other parties underlie the seemingly non-complex act of initiating payment on the user-friendly one quick Interfaces. Anyone who has transferred money between countries recently realizes the process has evolved little in decades. Too slow, untrustworthy and too expensive are the gripes. And as more of us become plugged into the globalized economy, the scale of the problem is surely going to skyrocket. This begs the need for if a 21st-century digital solution to cross-border payments which could be faster, less expensive, more reliable and transparent.

#### The chink in the armor of Global Businesses:

Consider the case of Ashok Chandra, a mid-tier textile exporter. His business entails frequent wire-transfers to Dubai and Indonesia. These wire-transfers can take up to 3 days causing Mr. Chandra to worry about delays in addition to working capital constraints. He feels left in the dark regarding the standing of his dealing and out of pocket high fees

Such wire-transfers are often a major deterrent to the volume of trade. Small to medium-sized enterprises, above all, suffer from payments difficulties. It may take weeks for a cross-border payment to settle, which may place the brakes on the business's liquidity, and build friction between customers and suppliers. A McKinsey survey found that global payments looks set to be a \$2-trillion industry by 2020, accounting for a third of banking revenues. Nearly 70 percent of mid-sized B2Bs in the U.S. strongly preferred digital channels for payment approval and foreign exchange transactions emphasizing the dire need for efficient and real-time payments.

The payments industry is grappling for the backend

to catch up with the apparent convenience which payments apps seek to provide.  
Over the years, the size of import and export trade between the U.S. and China has burgeoned to more than half a trillion dollars.

Presently payment suppliers have to pre-fund accounts on either facet of dealing in native currencies. this may be costly and result in a poor deal for purchasers. Benefiting from favorable exchange rates which come as an added advantage of faster payments is crucial as well.

#### Blockchain as a nostrum:

Blockchain is touted as the solution for global business ills by its ardent supporters. The next big disruptive technology in the payment space Blockchain can ease Cross-border payments in several ways. The distributed ledger technology (DLT) that underlies cryptocurrencies is currently being deployed by a few providers as the answer. Roughly seventy percent of prime international banks are experimenting with it, and recently some big implementations are underway

The distinctive point of blockchain – that reciprocally distrusting parties, geographically agnostic, will reach a sure agreement electronically is a banker's dream. For about the same transaction fee and a more competitive forex rate, API-based blockchain platforms can significantly cut down processing time. This can significantly cut-down costs after nearly a century long-stagnant processing fee of traditional banking. Kuangyi Wei, head of research and market engagement at management consultancy Parker Fitzgerald estimates that it can save a third off the current operating costs.

Blockchain thus offers a cryptographically secure and trusty platform with high transparency. It further enables the bypassing of typical Forex rates. Small and mid-size firms like that of Mr. Chandra's can thus reap the benefits of the best rates for their business.

Giants like IBM

are working on designing a universal, cross-country blockchain payments solution that can herald instantaneously inter-bank transfer. This would require streamlining multiple steps involving multiple stakeholders transacting in different currencies.

A skeptic's view:

Distributed ledgers are changeless databases area unit maintained by a network of computers, instead of a centralized authority, and secured by advanced cryptography. These are often described and clunky and difficult to maintain. They require enormous computing power to reconcile everything. The matter is further aggravated by the volume of cross-border payments, banks, and jurisdictions.

Centralized databases area unit still a lot of

economical than blockchains. Over-sold and over-hyped area unit different words utilized in this context, managing expectations on what blockchain are able to do are vital.

Operational resilience has additionally become a significant issue for central banks and regulators. considerations raised regarding DLT embrace privacy, security, measurability, and competition

Only time can tell if Blockchain will eventually become the panacea of payments it is heralded to be.

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By Ajay Bidyarthi - August 31, 2019 6551

## What Is an Investment?

An investment is a resource or thing procured with the objective of producing pay or appreciation. Economically, investment is to buy products that are not expended nowadays but are utilized within the future to make riches. Financially, an investment can be a money related resource acquired with the idea that the resource will give wage within the future or will afterward be sold at the next cost for a benefit.

The desire of a return within the frame of wage or cost appreciation is the center preface of investment. The range of resources in which one can contribute and earn a return may be an exceptionally wide one. Hazard and return go hand-in-hand in contributing; more chance, for the most part, implies more anticipated returns, whereas higher returns are ordinarily went with by higher chance. At the low-risk conclusion of the range are essential ventures such as Certificates of Store; bonds or fixed-income rebellious are higher up on the hazard scale, whereas stocks or values are respected as less secure still, with commodities and subordinates for the most part considered to be among the least secure ventures. One can too contribute in something as ordinary as arrive or genuine bequest, whereas those with a taste for the obscure – and profound pockets – seem to contribute in fine craftsmanship and collectibles.

## Key

### Takeaways

In contributing, hazard and return are two sides of the same coin; less chance, for the most part, implies low anticipated returns, whereas higher returns are more often than not went with by higher risk. Risk and return desires can shift broadly inside the same resource course; a blue-chip that exchanges on the NYSE and a micro-cap that exchanges over-the-counter will have exceptionally diverse risk-return profiles. The sort of returns produced depends on the resource; numerous stocks pay quarterly profits, whereas bonds pay intrigued each quarter and genuine domain gives rental income. Whether buying security qualifies as contributing or hypothesis depends on three components – the sum of the chance taken, the holding period, and the source of returns.

## Some of the current investments in India

### India Investment (%GDP)

Resources beneath administration (AUM) by shared stores in India come to Rs 23.16 trillion (US\$ 334.82 billion) in February 2019. Indian vehicle industry start-ups have gotten speculations of US\$ 491 million in 2018, driven by Essel Green Mobility's US\$ 300 million venture in Zipgo. As of Walk 2019, the Oil and Normal Gas Corp (ONGC) is arranging to contribute over US\$ 500 million in its lead resource, Mumbai High. In Walk 2019, the Tata bunch entered the air terminals segment in India by concurring to contribute Rs 8,000 crore (US\$ 1.16 billion) within the GMR gather together with two other investors. Oyo Rooms will contribute around US\$ 200 million towards capital consumption, innovation and administration in its India and South Asia commerce over 2019. Proceeds through Initial Public Offers (IPO) in India come to US\$ 5.5 billion in 2018 and US\$ 0.9 billion in Q1 2018-19. The total number of bargain action in India come to 1,640 in 2018. Mergers and acquisitions (M&A) movement within the nation has come to US\$ 71.3 billion in 2018. Companies in India have raised around US\$ 5.52 billion through Introductory Open Offers (IPO) in 2018 (up to November). In November 2018, resources overseen by common stores come to Rs 24.03 trillion (US\$ 344.31 billion). Investments by Elective Speculation Reserves (AIFs) expanded 90 percent year-on-year between April-June 2018 to Rs 74,893 crore (US\$ 10.26 billion). Reliance Industries Limited (RIL) is arranging to contribute over Rs 10,000 crore (US\$ 1.37 billion) in Uttar Pradesh and Rs 5,000 crore (US\$ 687 million) in West Bengal over another three years. Vedanta Assets Plc is arranging to contribute approximately US\$ 9 billion in India over the following few a long time to extend its hydrocarbons and metals and mining businesses. Coal India (CIL) plans to contribute US\$ 20-25 billion in the following five a long time to attain a yearly yield of 1 billion tons by 2019-20.

### Road ahead

Investing in green technology – Worldwide fresh investment in renewable vitality expanded by 2% in 2017 with ad

d up to exchanges moreover expanding 1%. The industry finished 2018 with modern ventures of \$279.8 billion and exchanges totaling \$393.8 billion. 2018 is on track to be another solid year for venture with add up to unused ventures within the industry at \$211.4 billion through the third quarter.

Green innovation ventures are taking an assortment of shapes, with increments in wind control and electric vehicle improvements, the establishment of renewable control capacity coming to unused highs and noteworthy increments in open showcase speculations around the world. Over the globe in 2018, Asia-Pac is driving venture with solar-powered developments drawing within the most noteworthy financing. Thus, what was once unimportant see into the long-run has without a doubt presently gotten to be a reality as nations around the world are making considerable ventures year over year in green innovation.

Green innovation contributing, too alluded to as clean innovation contributing, regularly includes the choice of ventures in companies with maintainable and naturally neighborly tones and products/services. Whereas a few clean advances offer advancements that increment asset efficiency and proficiency, others diminish the natural effect. As green innovation proceeds to rise as a developing drive, a few solid industry clusters have developed with shifting levels of speculation as development patterns rise and alter.

**Micro-investing** – Investment isn't saved for those with parts of additional cash or associations to money related proficient. Anybody can contribute, and you don't need much to urge begun. In reality, pennies will do fair fine. How you inquire? A progressively prevalent way is through a developing drift, made a difference by the most recent in-app innovation, called miniaturized scale investing. As the title infers, small scale contributing permits you to contribute cash in little sums, regularly automatically. Most smaller-scale contributing happens through mobile-based stages. You'll make investments—you truly do invest money, and more on that fair ahead—or check your account on the go along with your cellphone or tablet. The thought is that little speculations made at frequent intervals can include up without much exertion or wallet torment. We are a "right here, right presently" culture, and in case we are able to arrange a modern combine of shoes whereas strolling down the street.

Depending on the sort of app you employ, smaller-scale contributing can cruel distinctive things. One way to miniaturized scale contribute is to utilize an app that rounds up the dollar sums on buys you make on a credit or charge card and redirects the additional cash to a speculation account. (There are too miniaturized scale reserve funds apps that occupy additional alter to a reserve funds account. These accounts are for the most part FDI C safety net provider and, not at all like venture accounts, are not subject to showcase risk.) Using an app on your phone, you enter a few individual data, counting your credit or charge card number or multiple account numbers, since you're frequently able to interface various cards to your account. You must reply a few extra questions planned to decide the sort of investments that fit your venture objectives and work together with your chance resistance. A few small scale contributing apps utilize calculations to make a hazard profile based on your reactions to different questions, at that point make suggestions on how and where you ought to invest your money.

At that point, you ended up as an investor. After you spend \$7.50 for a sandwich at lunch, the app rounds up your buy to the closest dollar (\$8) and naturally exchanges \$0.50 to a venture account. Once your round-ups are large enough (say \$5), you'll be able to utilize that cash to buy stocks or other ventures, or the app might make buys for you naturally based on your venture profile.

**Artificial Intelligence-Driven Investing** – The chart underneath visualizes how an AI procedure can select stocks based on a better dimensional see of the world.

In this case, the target could be a portfolio of developing markets equities that shows cautious, esteem characteristics. The chart maps all recorded values within the rising advertise values (MSCI EM IMI) universe. Each security is plotted on the surface based on its facilitates to tall dimensional esteem and profit highlights, which are each characterized as a portion of the AI approach.

The vertical pivot appears how protective these include combinations have been on normal between 2013 and 2017. The higher the crest, the more cautious in down markets. The more profound the trough, by differentiate, the less cautious. On the proper side of the visualization, a two-dimensional cut appears where well-known developing showcase names – portrayed by their esteem and profit characteristics – finished this period.

This approach characterizes a complex and advancing choice boundary, outlined by the maroon form, inside which stocks are chosen to develop a portfolio. This choice boundary speaks to a steady, defensive/value locale of the outline. It may be a nonlinear locale that's tall dimensional and advances as showcase conditions alter. Stocks inside the choice boundary tend to display protective characteristics per se, but the strategy moreover recognizes stocks that tend to have future profit pay development potential as well.

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```
In [127]: import requests
from bs4 import BeautifulSoup

url = "https://insights.blackcoffer.com/big-data-analytics-in-healthcare/"

# Send a GET request to the URL
response = requests.get(url)

# Parse the HTML content using Beautiful Soup
```

```
soup = BeautifulSoup(response.content, "html.parser")

title = soup.title.get_text()

# Find the article text
article = soup.article.get_text()

# Print the results
print("Title: ", title)
print("Article: ", article)
with open("148.txt", "w", encoding="utf-8") as file:
    file.write("Title: {}\n\n".format(title))
    file.write(article)
```

Title: Big Data Analytics in Healthcare | Blackcoffer Insights  
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Home What We Think Big Data Analytics in Healthcare

What We ThinkHealthcare Big Data Analytics in Healthcare

By Ajay Bidyarth - July 19, 2019 7095

Quality and affordable healthcare is a vision of all governments across the globe. The high cost of Medical service and lack of sufficient infrastructure is detrimental to this vision. In developed countries such as the U.S., reducing healthcare cost is an agenda point of all the politicians. Even in India, affordable healthcare will be as important as "Roti, Kapda and Makan" in the near future.

Technology can play a big role in reducing healthcare cost and making it more efficient. The vast quantity of data is available with Hospitals and insurance providers. Big data can play a big role in analyzing this data to produce actionable insight. Some of the benefits of using big data are as follows,

Reduce Fraud and Waste:

Fraud has a big

impact on everyone. In fact, the National Healthcare Anti-Fraud Association estimates that fraud costs Americans at least \$33 billion to \$55 billion annually – that's approximately 3-5% of the nation's health care spending of \$2.26 trillion. For example: Sometimes, providers or hospitals report procedures or services that were never provided.

Big data analytics can help an insurance company to discover these frauds. Big data can use a huge amount of historical data to identify expected procedure or service for reported illness (identified using diagnosis code). If the expected procedure code doesn't match with a billed procedure code, insurance companies can tag claim as a potential fraud claim. Once a claim is tagged as a fraud claim, the manual examiner needs to do additional verification to ensure that the claim is submitted by fraud provider.

Sometimes, patients' fake identity to get the benefit of insurance. Using big data, companies can match patient's information with services he/she has taken. If services taken by the patient is very different from the past medical history of patients, analytics can tag claim as one of the susceptible fraud claims.

Storing of data:

Traditional health care providers find it difficult to store a vast amount of data. More ever, traditional data base stores only structured data. Big data can solve storage issue by handling huge volume and variety of data. Having historical data of the patient can reduce healthcare drastically.

Improving scheduling of appointments:

It is very tough to get a Physician's appointment in developed countries. One of my friends, senior director in a multinational bank, got an appointment for hip replacement surgery with a waiting period of six months. He was not able to sit and as a result, he didn't drive or come to the office for six months. The waiting period can be drastically reduced if the hospital is able to forecast the number of patients likely to miss appointments. Based on historical data, hospitals can predict the number of no shows and can accordingly schedule appointments so as not to miss any slot because of no shows.

Reducing overpayment and underpayment made to hospital:

If a health insurance company pays an amount to hospital/provider that is greater than the contracted amount for service, payment is called an overpayment. Similarly, if payment made is lesser than the contracted amount for service, payment is called an underpayment. Overpayment or underpayment is a big headache for both insurance companies and patients. According to AHA data, private insurance companies have consistently overpaid hospitals for inpatient care for more than three decades. These overpayments have varied significantly over the years, but have grown dramatically in the past few years.

Overpayment or underpayment can happen because of multiple reasons such as system glitch, a coding error. Using cognitive analysis, big data can predict the payment amount. If the predicted payment amount is significantly different than the actual payment amount, the system can identify possible overpayments or underpayments.

Predictive treatment:

Throughout the world, healthcare is based on diagnosing the presence of disease and subsequently treating the disease if present. Early diagnosis of the illness is a major challenge. Patients do go for diagnosis only when the symptom is evident. It becomes challenging for the physician to treat illness once illness grows beyond a certain level.

Predictive or preventive can help to identify if an individual will develop a disease. Different forms of health

h device such as iWatch can capture data and send to the hospital at regular interval of time. Using predictive analysis, the hospital can predict if a patient is likely to develop an illness. Early diagnosis of illness can help doctors to treat patients effectively and at a lower cost.

Predictive treatment can reduce the number of days a patient needs to be admitted in the hospital. As inpatient treatment is costlier than outpatient treatment, doctors can discharge patients if he/she thinks that the condition of the patient is not serious. The hospital can monitor the patient remotely using medical sensors and can call the patient to the hospital when it is required.

Big data plays a big role when a person suffers from multiple illnesses. As per Dr. Abhishek Rai, M.S. Ortho of K.E.M. Medical College Mumbai, "It becomes challenging to operate patients when he suffers from multiple illnesses. Many a number of times, physicians are not aware of all issues with patients as patients themselves are not aware of all illness". As an example, it's tough to operate on a person suffering from diabetes as blood doesn't coat easily for a diabetic person. If a physician doesn't have historical data of a diabetic person, he/she may operate diabetic person wrongly.

Another example where big data analytics can play a huge role in predicting disease is a genetic disease. If a person has breast cancer, her child is 15-20 percent likely to develop breast cancer. Using big data analytics, the system can identify patients likely to suffer from genetic disease and request patients to do timely screening. Genetic diseases can be screened in first, second- or third-degree relatives to reduce the morbidity and mortality.

#### Timely diagnostic reports:

In India, it takes 2-3 days on an average to get an MRI scan. Delay is not because of lack of medical instruments but because of lack of qualified radiologists. This problem can be mitigated by integrating Medical imaging with big data. Integration of medical imaging with big data will ensure that radiologists get the report in a short span of time. Big data will help not only to reduce the turnaround time required to get reports but also to get better reports. Technology can convert image to graphs and charts making it easier for radiologists to read the report.

As data works on the principle of abundance instead of scarcity. So, the more data we have, the better the outcomes can be obtained. Thus, Big Data technology is clearly the digital disruptor to revolutionize the healthcare sector by consolidating the data from disparate platforms to build a 360-degree view about the human body and help the healthcare provider to generate solutions to life-threatening problems and improved healthcare opportunities.

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Title: Business Analytics In The Healthcare Industry | Blackcoffer Insights  
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Home What We Think Business Analytics In The Healthcare Industry

What We Think Healthcare Business Analytics In The Healthcare Industry

By Ajay Bidyarthi - July 19, 2019 7662

Analytics is a statistical scientific process of discovering and presenting the meaningful patterns that can be found in data. While business analytics refers to the skills, technologies, applications, practices, computer programming and operations research for the continuous exploration of data to gain insight that drives business decisions.

Business analytics technology is helping healthcare organizations regulate existing data to improve clinical and business operations. In addition to this, analytics help to identify the symptoms of diseases in preliminary stages itself along with suggesting possible remedies for the same without any need of the intervention of a human being. With the help of analytics and chatbots patient can now look for expert doctor advice in the comfort of their home free of charge in most of the cases with as easy accessibility as one-touch from your smartphones.

According to

the survey conducted by Health Catalyst, a whopping 90% of the respondents admitted that analytics is going to be either "extremely important" or "very important" to their organization within the next few years. And the respondents also rated the importance of healthcare trends and the role played by analytics in them.

Analytics is thus becoming very crucial in tracking different types of healthcare trends. Advanced analytics touches every aspect of healthcare software systems including clinical, operational and financial sectors.

#### The Role of Analytics in Transforming Healthcare

Healthcare organizations have begun to adopt technologies like PACS imaging systems and EMRs or Electronic Health Records that attempts to make sense of the massive data that flows through the system (both structured and unstructured). Hence, it is important to know what are the tools that can extract information from the data to generate value and enjoy operational, financial and clinical insights.

There are genome analyzers and other analytics tools in the market that help in understanding the facts, and eliminate unwanted/useless details to extract only what's needed. The end result of this is better clinical outcomes for the patient. There are several ways in which healthcare organizations can make use of information collected through various sources.

Disease Surveillance and Preventative Management Develop Clinically Relevant and More Effective Diagnostic and Therapeutic Techniques Development of a Faster, Leaner, and More Productive R&D Pipeline

Examples of business intelligence in healthcare

The following examples indicate successful applications, built on a foundation of advanced analytical capabilities, in the healthcare industry:

UnityPoint Health in Iowa: managed to reduce their risk-adjusted readmission rate by 40% over the course of three years in one of their pilot hospitals by utilizing predictive modeling via Business Intelligence software. Washington State Health Care Authority: reduced unnecessary ER visits by implementing a Business Intelligence for the healthcare system to electronically integrate and distribute patient data across ER departments. Hospitals were able to identify patients who visited more frequently than others and share that patient's information with other hospitals. This resulted in an overall reduction of frequent ER visits by 10%, a decrease in visits by frequent ER patients by 10.7%, and scheduled prescription allocation decreased by 24%.

Predictive analytics is key to enabling hospitals to properly manage their readmission rates and sidestep costly penalties while simultaneously addressing important aspects of patient treatment and care.

Analytics are changing roles in the healthcare industry. An increasing number of informed patients are taking more responsibility for their own care. Likewise, physicians are finding more satisfaction with their positions as positive effects increase. More time spent with individual patients has increased which gives physicians the chance to form a trusted relationship with the patient. Physicians want to spend time with their patients – to know them, interact with them, and help them. When the time to develop a relationship is diminished, the physician is less satisfied with his or her profession.

Analytics has changed the way the healthcare world operates. With the ability to transform the way medicine has been practiced for years, analytics have resulted in improved health, reduction in diseases, and more satisfied patients and physicians.

Combine artificial intelligence with data analysis and machine learning IoT, and it is easy to provide proactive care to patients. Hence, it would be a good move to invest in analytical solutions that can control and mitigate clinical and financial risks, with new payment bundles and models to go with it.

Blackcoffer Insights 10 | Tanmay Shrivastava and Vishnu Bajpai, International Management Institute

TAGSbusiness analyticsEMRsHealth Catalysthealthcare organizationsPACS imaging

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Article:

Home What We Think Challenges and Opportunities of Big Data in Healthcare

What We ThinkHealthcare Challenges and Opportunities of Big Data in Healthcare

By Ajay Bidyarth - July 19, 2019 8354

## Big Data

To begin with I shall first like to explain what big data is and why it has become so important in our lives. Big data is simply data, but with a huge size. Data that is not just voluminous but also growing exponentially with time. Such data sets are so large and complex that it is not possible to store or process them using traditional data management tools. So, how huge can this data be? Social media sites like Facebook generate more than 500 terabytes of new data every day in the form of photos, video uploads, text messages, etc. A single Jet engine can generate more than 10 terabytes of data in 30 minutes of flight time. With many thousand flights per day, generation of data reaches up to many petabytes. Data contained in these sets are not always structured. It can be semi-structured or even unstructured. When such is the size and dimension of data we can well imagine how complicated it must be to process and analyze it. Therefore, modern methods of data analysis are being developed and used to process the information contained in big data sets.

## Opportunities

Now coming to the opportunities that Big Data provides, they are not just limited to healthcare. Big data analysis is now a disruptive technology which has intervened into numerous fields and proved its worth. Healthcare is no exception. Big data has the potential to change the entire dynamics of the healthcare industry and improve the quality of life of people. Healthcare industry is a very large and complicated system. It involves a lot of risks and always demands better care. However, when a large number of patients seek emergency care the complications as well as the cost rise exponentially. In India, many times, we even lack sufficient infrastructure to support the patients, there is a deficit of beds as well as doctors to provide treatment to the patients. For instance, when epidemics break out and lives are lost at a very alarming rate, we can easily gauge our helplessness. However, the scenario is certainly improving now. With the advent of digitization into the healthcare system, healthcare providers or practitioners are now having access to a huge amount of patient health data. This healthcare big data can be processed and analyzed to identify patient patterns more quickly and effectively. The information obtained can be extremely useful to figure out chronic health issues and provide preventive treatment plans well beforehand so as to curb that disease or disorder from occurring. This method is also known as predictive analysis and it is one of the most crucial benefits of big data in healthcare. This technology can help the healthcare industry in more ways than we can infer. Healthcare organizations that have implemented predictive analysis have witnessed a reduction in ER visits by providing support and care to patients and decreasing emergency situations.

Apart from reduced ER visits and timely treatment, there are many other benefits of big data and predictive analysis. Patients with high-risk life-threatening issues can be provided with more customized treatment facilities. Due to lack of data, there exists a lack of proper planning in hospitals. Under or over-booking of staff, lack of medical equipment, medicines, and other facilities are a result of inefficient budgeting and ill-management of finances. Using predictive analysis these problems can be solved which will lead to reduced costs and efficient management of finances. Better staff allocation and admission rate prediction shall facilitate improvement in daily operations of healthcare organizations. By using big data the effect of recency bias could be reduced as well. When we give more importance to recent events and tend to ignore the effect of the older ones, it may lead to incorrect decisions. This is known as recency bias. Big data also helps in preventing fraudulent act

ivities which in turn prevents losses of insurance companies.

#### Challenges

While all of this is changing the healthcare industry for the better, it is not that easy to reap the benefits of big data. There are a whole lot of challenges and vulnerabilities attached to its implementation. One of the biggest challenges is security. Healthcare big data contains the personal information and health history of patients. Acts of hacking, cyber theft and phishing pose a serious threat to these databases. Such data could be stolen and sold for huge sums of money. Protection of the patients' privacy hence is a serious challenge to big data implementation. Also, the data would contain external data apart from medical information. The organization, therefore, has to take care of privacy, legal compliances, and government policies. Privacy and security of patients have to be given utmost importance and no breach of any kind can be permitted.

The next challenge is data classification and modeling. The size of the data is massive and it is less structured and heterogeneous. Classifying such massive data to identify relevant information is a big challenge. Modeling of such unstructured data is equally difficult.

Storage and retrieval is another major challenge. Huge cloud servers with sufficient space are required to store such voluminous data. Also, the speed should be high so that uploading of data can be done hassle-free. The way storage is a challenge, retrieval also is a matter of concern. Integrating the data and getting all relevant systems to link each other is a tough job.

The next challenge is a major one in my opinion. Finding the right talent who own the expertise to implement this modern technology is an arduous task. Shortage of required talent is a crisis in the market today. Even after hiring the right talent it is a challenge to retain them. Scarce resources like data scientists are hard to find and even harder to retain. They are easily poached by competitors. A good and efficient compensation strategy, conducive work environment, high incentives, opportunities for career growth and development can be some of the ways of retaining such intellectual talent.

In a nutshell, we can conclude that while big data is a disruptive technology which will bring about landmark changes in healthcare dynamics, the challenges and vulnerabilities need to be addressed with the utmost care and sense of responsibility.

Blackcoffer Insights 10 | Subhasmita Dey, Xavier School of Human Resource Management, XUB

TAGSdiseasehealthcare systemhigh incentivesmassive datapredictive analysis

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```
In [130]:  
import pyphen  
from textblob import TextBlob  
import nltk  
  
# Create an instance of Pyphen for English language  
dic = pyphen.Pyphen(lang='en')  
  
def compute_text_variables(text):  
    # Tokenize the text into sentences.  
    sentences = nltk.sent_tokenize(text)  
  
    # Tokenize the text into words.  
    words = nltk.word_tokenize(text)  
  
    # Compute the positive and negative scores using TextBlob.  
    blob = TextBlob(text)  
    pos_score = blob.sentiment.polarity  
    neg_score = 1 - pos_score  
  
    # Compute the polarity and subjectivity scores using TextBlob.  
    polarity_score = blob.sentiment.polarity  
    subjectivity_score = blob.sentiment.subjectivity  
  
    # Compute the average sentence length.  
    avg_sentence_length = len(words) / len(sentences)  
  
    # Compute the percentage of complex words.  
    complex_word_count = 0  
    for word in nltk.word_tokenize(text):  
        if len(word) > 2 and len(set(word)) > 2:  
            complex_word_count += 1  
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))  
  
    # Compute the FOG index.  
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)  
  
    # Compute the average number of words per sentence.  
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)  
  
    # Compute the count of complex words.
```

```

complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('38.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.07644904046085149, 'negative_score': 0.9235509595391485, 'polarity_score': 0.07644904046085149, 'subjectivity_score': 0.4322312097351466, 'avg_sentence_length': 21.847058823529412, 'pct_complex_words': 0.6806677436725902, 'fog_index': 9.0110906268808, 'avg_words_per_sentence': 21.847058823529412, 'complex_word_count': 1264, 'word_count': 1857, 'avg_syllables_per_word': 1.4221863220247712, 'personal_pronoun_count': 54, 'avg_word_length': 4.400107700592353}

```

In [131..

```

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dic = pyphen.Pyphen(lang='en')

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    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
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        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.

```

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fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

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    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('39.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.11342618634019908, 'negative_score': 0.8865738136598009, 'polarity_score': 0.11342618634019908, 'subjectivity_score': 0.47827356825764467, 'avg_sentence_length': 23.384615384615383, 'pct_complex_words': 0.7034774436090225, 'fog_index': 9.635237131289763, 'avg_words_per_sentence': 23.384615384615383, 'complex_word_count': 1497, 'word_count': 2128, 'avg_syllables_per_word': 1.5718984962406015, 'personal_pronoun_count': 30, 'avg_word_length': 4.93843984962406}

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# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('40.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.13783703906943345, 'negative_score': 0.8621629609305665, 'polarity_score': 0.13783703906943345, 'subjectivity_score': 0.47109967888136906, 'avg_sentence_length': 20.55, 'pct_complex_words': 0.697323600973236, 'fog_index': 8.498929440389295, 'avg_words_per_sentence': 20.55, 'complex_word_count': 1433, 'word_count': 2055, 'avg_syllables_per_word': 1.4330900243309002, 'personal_pronoun_count': 52, 'avg_word_length': 4.498296836982968}
```

In [133]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('41.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.05941851181605283, 'negative_score': 0.9405814881839472, 'polarity_score': 0.05941851181605283, 'subjectivity_score': 0.4965587190587192, 'avg_sentence_length': 25.523255813953487, 'pct_complex_words': 0.69749430523918, 'fog_index': 10.488300047677066, 'avg_words_per_sentence': 25.523255813953487, 'complex_word_count': 1531, 'word_count': 2195, 'avg_syllables_per_word': 1.4883826879271072, 'personal_pronoun_count': 55, 'avg_word_length': 4.651480637813211}

```

In [134..]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)

```

```

pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('42.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.11268316535894658, 'negative_score': 0.8873168346410534, 'polarity_score': 0.11268316535894658, 'subjectivity_score': 0.4438416813221501, 'avg_sentence_length': 23.72222222222222, 'pct_complex_words': 0.6973067915690867, 'fog_index': 9.767811605516524, 'avg_words_per_sentence': 23.72222222222222, 'complex_word_count': 1191, 'word_count': 1708, 'avg_syllables_per_word': 1.4549180327868851, 'personal_pronoun_count': 59, 'avg_word_length': 4.55327868852459}

```

In [135..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('43.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.14648995519248684, 'negative_score': 0.8535100448075131, 'polarity_score': 0.14648995519248684, 'subjectivity_score': 0.4137125532695152, 'avg_sentence_length': 20.88, 'pct_complex_words': 0.7116858237547893, 'fog_index': 8.636674329501915, 'avg_words_per_sentence': 20.88, 'complex_word_count': 743, 'word_count': 1044, 'avg_syllables_per_word': 1.514367816091954, 'personal_pronoun_count': 20, 'avg_word_length': 4.688697318007663}

```

In [136]

```

import pyphen
from textblob import TextBlob
import nltk

```

```

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('44.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
-----  
FileNotFoundException                                     Traceback (most recent call last)  
~\AppData\Local\Temp\ipykernel_30512\1802287654.py in <module>  
     82     }  
     83  
--> 84 with open('44.txt', 'r', encoding=result['encoding']) as file:  
     85     text = file.read()  
     86  
  
FileNotFoundException: [Errno 2] No such file or directory: '44.txt'
```

```
In [137]:  
import pyphen  
from textblob import TextBlob  
import nltk  
  
# Create an instance of Pyphen for English language  
dic = pyphen.Pyphen(lang='en')  
  
def compute_text_variables(text):  
    # Tokenize the text into sentences.  
    sentences = nltk.sent_tokenize(text)  
  
    # Tokenize the text into words.  
    words = nltk.word_tokenize(text)  
  
    # Compute the positive and negative scores using TextBlob.  
    blob = TextBlob(text)  
    pos_score = blob.sentiment.polarity  
    neg_score = 1 - pos_score  
  
    # Compute the polarity and subjectivity scores using TextBlob.  
    polarity_score = blob.sentiment.polarity  
    subjectivity_score = blob.sentiment.subjectivity  
  
    # Compute the average sentence length.  
    avg_sentence_length = len(words) / len(sentences)  
  
    # Compute the percentage of complex words.  
    complex_word_count = 0  
    for word in nltk.word_tokenize(text):  
        if len(word) > 2 and len(set(word)) > 2:  
            complex_word_count += 1  
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))  
  
    # Compute the FOG index.  
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)  
  
    # Compute the average number of words per sentence.  
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)  
  
    # Compute the count of complex words.  
    complex_word_count = 0  
    for word in nltk.word_tokenize(text):  
        if len(word) > 2 and len(set(word)) > 2:  
            complex_word_count += 1  
  
    # Compute the total word count.  
    word_count = len(nltk.word_tokenize(text))  
  
    # Compute the average syllable per word.  
    syllable_count = 0  
    for word in nltk.word_tokenize(text):  
        syllable_count += len(dic.inserted(word).split('-'))  
    avg_syllables_per_word = syllable_count / word_count  
  
    # Compute the count of personal pronouns.  
    personal_pronoun_count = 0  
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):  
        if tag == 'PRP':  
            personal_pronoun_count += 1  
  
    # Compute the average word length.  
    total_word_length = 0  
    for word in nltk.word_tokenize(text):  
        total_word_length += len(word)  
    avg_word_length = total_word_length / word_count  
  
    # Return a dictionary of the computed variables.  
    return {  
        'positive_score': pos_score,  
        'negative_score': neg_score,  
        'polarity_score': polarity_score,  
        'subjectivity_score': subjectivity_score,  
        'avg_sentence_length': avg_sentence_length,  
        'pct_complex_words': pct_complex_words,  
        'fog_index': fog_index,  
        'avg_words_per_sentence': avg_words_per_sentence,  
        'complex_word_count': complex_word_count,
```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('45.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1838439330277566, 'negative_score': 0.8161560669722434, 'polarity_score': 0.1838439330277566, 'subjectivity_score': 0.5668872230710466, 'avg_sentence_length': 25.29268292682927, 'pct_complex_words': 0.7174541947926711, 'fog_index': 10.404054848648776, 'avg_words_per_sentence': 25.29268292682927, 'complex_word_count': 744, 'word_count': 1037, 'avg_syllables_per_word': 1.3895853423336548, 'personal_pronoun_count': 35, 'avg_word_length': 4.540019286403086}

```

In [138..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'avg_word_length': avg_word_length,
        'personal_pronoun_count': personal_pronoun_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('46.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1660327767470625, 'negative_score': 0.8339672232529375, 'polarity_score': 0.1660327767470625, 'subjectivity_score': 0.5276339323608232, 'avg_sentence_length': 30.729411764705883, 'pct_complex_words': 0.6864471669218989, 'fog_index': 12.566343572651114, 'avg_words_per_sentence': 30.729411764705883, 'complex_word_count': 1793, 'word_count': 2612, 'avg_syllables_per_word': 1.4900459418070444, 'personal_pronoun_count': 58, 'avg_word_length': 4.57312404287902}

```

In [139..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('47.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.12186374005236285, 'negative_score': 0.8781362599476371, 'polarity_score': 0.12186374005236285, 'subjectivity_score': 0.4620429304561041, 'avg_sentence_length': 23.6818181818183, 'pct_complex_words': 0.673320537428023, 'fog_index': 9.742055487698483, 'avg_words_per_sentence': 23.6818181818183, 'complex_word_count': 1754, 'word_count': 2605, 'avg_syllables_per_word': 1.4245681381957773, 'personal_pronoun_count': 87, 'avg_word_length': 4.445297504798464}

```

In [141..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('48.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.137749192897498, 'negative_score': 0.862250807102502, 'polarity_score': 0.137749192897498, 'subjectivity_score': 0.43008593807322615, 'avg_sentence_length': 23.553846153846155, 'pct_complex_words': 0.7387328543435663, 'fog_index': 9.71703160327589, 'avg_words_per_sentence': 23.553846153846155, 'complex_word_count': 1131, 'word_count': 1531, 'avg_syllables_per_word': 1.6022207707380798, 'personal_pronoun_count': 34, 'avg_word_length': 5.096015676028739}

```

In [142]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('49.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.11213765648173203, 'negative_score': 0.887862343518268, 'polarity_score': 0.11213765648173203, 'subjectivity_score': 0.3704046416546416, 'avg_sentence_length': 18.636363636363637, 'pct_complex_words': 0.7006097560975609, 'fog_index': 7.734789356984479, 'avg_words_per_sentence': 18.636363636363637, 'complex_word_count': 1149, 'word_count': 1640, 'avg_syllables_per_word': 1.4634146341463414, 'personal_pronoun_count': 21, 'avg_word_length': 4.546341463414634}

```

In [143..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('50.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.1455472454133169, 'negative_score': 0.8544527545866831, 'polarity_score': 0.1455472454133169, 'subjectivity_score': 0.392889095031952, 'avg_sentence_length': 30.0, 'pct_complex_words': 0.7151960784313726, 'fog_index': 12.28607843137255, 'avg_words_per_sentence': 30.0, 'complex_word_count': 1459, 'word_count': 2040, 'avg_syllables_per_word': 1.467156862745098, 'personal_pronoun_count': 68, 'avg_word_length': 4.636764705882353}
```

```
In [144]: import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('51.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.06437317678324873, 'negative_score': 0.9356268232167513, 'polarity_score': 0.06437317678324873, 'subjectivity_score': 0.45653048989379935, 'avg_sentence_length': 25.166666666666668, 'pct_complex_words': 0.6896877956480606, 'fog_index': 10.342541784925892, 'avg_words_per_sentence': 25.166666666666668, 'complex_word_count': 1458, 'word_count': 2114, 'avg_syllables_per_word': 1.4843897824030274, 'personal_pronoun_count': 39, 'avg_word_length': 4.649479659413434}

```

In [145...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('52.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

{'positive\_score': 0.16438157081014224, 'negative\_score': 0.8356184291898577, 'polarity\_score': 0.16438157081014224, 'subjectivity\_score': 0.5197866419294991, 'avg\_sentence\_length': 28.59259259259259, 'pct\_complex\_words': 0.7046632124352331, 'fog\_index': 11.71890232201113, 'avg\_words\_per\_sentence': 28.59259259259259, 'complex\_word\_count': 544, 'word\_count': 772, 'avg\_syllables\_per\_word': 1.6101036269430051, 'personal\_pronoun\_count': 8, 'avg\_word\_length': 5.034974093264249}

In [146]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

    with open('53.txt', 'r', encoding=result['encoding']) as file:
        text = file.read()

    variables = compute_text_variables(text)
    print(variables)

```

```
{'positive_score': 0.13318456501197615, 'negative_score': 0.8668154349880238, 'polarity_score': 0.13318456501197615, 'subjectivity_score': 0.49843892148460667, 'avg_sentence_length': 140.0, 'pct_complex_words': 0.7366666666666667, 'fog_index': 56.29466666666667, 'avg_words_per_sentence': 140.0, 'complex_word_count': 1547, 'word_count': 2100, 'avg_syllables_per_word': 1.427142857142857, 'personal_pronoun_count': 65, 'avg_word_length': 4.637142857142857}
```

In [153...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('54.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.18012847367686075, 'negative_score': 0.8198715263231393, 'polarity_score': 0.18012847367686075, 'subjectivity_score': 0.44101964343899824, 'avg_sentence_length': 21.4, 'pct_complex_words': 0.7219626168224299, 'fog_index': 8.848785046728972, 'avg_words_per_sentence': 21.4, 'complex_word_count': 927, 'word_count': 1284, 'avg_syllables_per_word': 1.5031152647975077, 'personal_pronoun_count': 29, 'avg_word_length': 4.725077881619938}

```

In [154..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('56.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.12456242587821538, 'negative_score': 0.8754375741217846, 'polarity_score': 0.12456242587821538, 'subjectivity_score': 0.3922361264466528, 'avg_sentence_length': 36.8125, 'pct_complex_words': 0.7572156196943973, 'fog_index': 15.02788624787776, 'avg_words_per_sentence': 36.8125, 'complex_word_count': 446, 'word_count': 589, 'avg_syllables_per_word': 1.5755517826825127, 'personal_pronoun_count': 11, 'avg_word_length': 5.037351443123939}

```

In [155...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('57.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

-----
FileNotFoundException Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_30512\2701950992.py in <module>
     82     }
     83
--> 84 with open('57.txt', 'r', encoding=result['encoding']) as file:
     85     text = file.read()
     86

FileNotFoundError: [Errno 2] No such file or directory: '57.txt'

```

In [156]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('58.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.0507995014245014, 'negative_score': 0.9492004985754986, 'polarity_score': 0.0507995014245014, 'subjectivity_score': 0.39126232741617345, 'avg_sentence_length': 30.03448275862069, 'pct_complex_words': 0.730838117106774, 'fog_index': 12.308626628132547, 'avg_words_per_sentence': 30.03448275862069, 'complex_word_count': 1284, 'word_count': 1742, 'avg_syllables_per_word': 1.5068886337543055, 'personal_pronoun_count': 19, 'avg_word_length': 4.777267508610792}
```

In [157]:

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('59.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.16275418660287078, 'negative_score': 0.8372458133971292, 'polarity_score': 0.16275418660287078, 'subjectivity_score': 0.42326982228298027, 'avg_sentence_length': 29.542857142857144, 'pct_complex_words': 0.7253384912959381, 'fog_index': 12.107278253661235, 'avg_words_per_sentence': 29.542857142857144, 'complex_word_count': 750, 'word_count': 1034, 'avg_syllables_per_word': 1.5154738878143132, 'personal_pronoun_count': 17, 'avg_word_length': 4.758220502901354}

```

In [158]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('60.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.17762329297874332, 'negative_score': 0.8223767070212566, 'polarity_score': 0.17762329297874332, 'subjectivity_score': 0.48427845456281493, 'avg_sentence_length': 20.83478260869565, 'pct_complex_words': 0.6944908180300501, 'fog_index': 8.611709370690281, 'avg_words_per_sentence': 20.83478260869565, 'complex_word_count': 1664, 'word_count': 2396, 'avg_syllables_per_word': 1.4632721202003338, 'personal_pronoun_count': 53, 'avg_word_length': 4.56093489148581}

```

In [159]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'word_count': word_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('61.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.2476043503821281, 'negative_score': 0.7523956496178719, 'polarity_score': 0.2476043503821281, 'subjectivity_score': 0.4928463648834018, 'avg_sentence_length': 19.294117647058822, 'pct_complex_words': 0.7134146341463414, 'fog_index': 8.003012912482067, 'avg_words_per_sentence': 19.294117647058822, 'complex_word_count': 702, 'word_count': 984, 'avg_syllables_per_word': 1.5294715447154472, 'personal_pronoun_count': 27, 'avg_word_length': 4.8272357723577235}

```

In [160...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('62.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1507305194805195, 'negative_score': 0.8492694805194805, 'polarity_score': 0.1507305194805195, 'subjectivity_score': 0.43244047619047615, 'avg_sentence_length': 28.52173913043478, 'pct_complex_words': 0.7484756097560976, 'fog_index': 11.708085896076353, 'avg_words_per_sentence': 28.52173913043478, 'complex_word_count': 491, 'word_count': 656, 'avg_syllables_per_word': 1.420731707317073, 'personal_pronoun_count': 7, 'avg_word_length': 4.745426829268292}

```

In [161]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('63.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.16213978015448605, 'negative_score': 0.837860219845514, 'polarity_score': 0.16213978015448605, 'subjectivity_score': 0.4538881461675578, 'avg_sentence_length': 26.157894736842106, 'pct_complex_words': 0.7176391683433937, 'fog_index': 10.750213562074201, 'avg_words_per_sentence': 26.157894736842106, 'complex_word_count': 1070, 'word_count': 1491, 'avg_syllables_per_word': 1.4138162307176392, 'personal_pronoun_count': 38, 'avg_word_length': 4.492957746478873}

```

In [162...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('64.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.13021022356638795, 'negative_score': 0.869789776433612, 'polarity_score': 0.13021022356638795, 'subjectivity_score': 0.3658877423945917, 'avg_sentence_length': 33.11111111111114, 'pct_complex_words': 0.7248322147651006, 'fog_index': 13.534377330350488, 'avg_words_per_sentence': 33.11111111111114, 'complex_word_count': 648, 'word_count': 894, 'avg_syllables_per_word': 1.5850111856823266, 'personal_pronoun_count': 9, 'avg_word_length': 5.073825503355705}

```

In [163...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('65.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.230435606060606, 'negative_score': 0.769564393939394, 'polarity_score': 0.230435606060606, 'subjectivity_score': 0.4757196969696969, 'avg_sentence_length': 18.542857142857144, 'pct_complex_words': 0.7211093990755008, 'fog_index': 7.705586616773059, 'avg_words_per_sentence': 18.542857142857144, 'complex_word_count': 468, 'word_count': 649, 'avg_syllables_per_word': 1.4453004622496148, 'personal_pronoun_count': 16, 'avg_word_length': 4.75808936825886}

```

```

In [164]: import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('66.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.04471916971916972, 'negative_score': 0.9552808302808303, 'polarity_score': 0.04471916971916972, 'subjectivity_score': 0.35036630036630045, 'avg_sentence_length': 23.8125, 'pct_complex_words': 0.6902887139107612, 'fog_index': 9.801115485564305, 'avg_words_per_sentence': 23.8125, 'complex_word_count': 263, 'word_count': 381, 'avg_syllables_per_word': 1.6351706036745406, 'personal_pronoun_count': 10, 'avg_word_length': 5.128608923884515}

```

In [165...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('67.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

{'positive\_score': 0.06399859943977593, 'negative\_score': 0.9360014005602241, 'polarity\_score': 0.0639985994397593, 'subjectivity\_score': 0.4667647058235297, 'avg\_sentence\_length': 19.45, 'pct\_complex\_words': 0.6820908311910883, 'fog\_index': 8.052836332476437, 'avg\_words\_per\_sentence': 19.45, 'complex\_word\_count': 796, 'word\_count': 1167, 'avg\_syllables\_per\_word': 1.4138817480719794, 'personal\_pronoun\_count': 67, 'avg\_word\_length': 4.4044558697515}

In [166]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('68.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.25234567901234567, 'negative_score': 0.7476543209876543, 'polarity_score': 0.25234567901234567, 'subjectivity_score': 0.43820987654320986, 'avg_sentence_length': 34.0, 'pct_complex_words': 0.7377450980392157, 'fog_index': 13.895098039215686, 'avg_words_per_sentence': 34.0, 'complex_word_count': 301, 'word_count': 408, 'avg_syllables_per_word': 1.6519607843137254, 'personal_pronoun_count': 10, 'avg_word_length': 5.21078431372549}
```

In [167...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('69.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.1124665404040404, 'negative_score': 0.8875334595959596, 'polarity_score': 0.1124665404040404, 'subjectivity_score': 0.3929154040404039, 'avg_sentence_length': 25.114754098360656, 'pct_complex_words': 0.7310704960835509, 'fog_index': 10.33832983777684, 'avg_words_per_sentence': 25.114754098360656, 'complex_word_count': 1120, 'word_count': 1532, 'avg_syllables_per_word': 1.6494778067885119, 'personal_pronoun_count': 32, 'avg_word_length': 5.18733681462141}

```

In [168]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('70.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.06500180375180376, 'negative_score': 0.9349981962481962, 'polarity_score': 0.06500180375180376, 'subjectivity_score': 0.4175293347003873, 'avg_sentence_length': 31.5, 'pct_complex_words': 0.7350427350427351, 'fog_index': 12.894017094017094, 'avg_words_per_sentence': 31.5, 'complex_word_count': 602, 'word_count': 819, 'avg_syllables_per_word': 1.5006105006105006, 'personal_pronoun_count': 14, 'avg_word_length': 4.768009768009768}

```

In [169...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('71.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.05171123937790605, 'negative_score': 0.948288760622094, 'polarity_score': 0.05171123937790605, 'subjectivity_score': 0.47516827000160355, 'avg_sentence_length': 24.854545454545455, 'pct_complex_words': 0.7190929041697147, 'fog_index': 10.229455343486068, 'avg_words_per_sentence': 24.854545454545455, 'complex_word_count': 983, 'word_count': 1367, 'avg_syllables_per_word': 1.504754937820044, 'personal_pronoun_count': 50, 'avg_word_length': 4.65764447695684}

```

In [170]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language

```

```

dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

    with open('72.txt', 'r', encoding=result['encoding']) as file:
        text = file.read()

    variables = compute_text_variables(text)
    print(variables)

{'positive_score': 0.09015037593984965, 'negative_score': 0.9098496240601504, 'polarity_score': 0.09015037593984965, 'subjectivity_score': 0.40777067669172945, 'avg_sentence_length': 27.061728395061728, 'pct_complex_words': 0.6865875912408759, 'fog_index': 11.099326394521043, 'avg_words_per_sentence': 27.061728395061728, 'complex_word_count': 1505, 'word_count': 2192, 'avg_syllables_per_word': 1.5237226277372262, 'personal_pronoun_count': 43, 'avg_word_length': 4.800182481751825}

```

In [171]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('73.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.12878701204999907, 'negative_score': 0.8712129879500009, 'polarity_score': 0.12878701204999907, 'subjectivity_score': 0.49652691464379767, 'avg_sentence_length': 27.853333333333333, 'pct_complex_words': 0.7304930588798468, 'fog_index': 11.433530556885273, 'avg_words_per_sentence': 27.853333333333333, 'complex_word_count': 1526, 'word_count': 2089, 'avg_syllables_per_word': 1.4155098133078028, 'personal_pronoun_count': 50, 'avg_word_length': 4.487314504547631}
```

In [172]:

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('74.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.07227218225419665, 'negative_score': 0.9277278177458034, 'polarity_score': 0.07227218225419665, 'subjectivity_score': 0.3920049674546078, 'avg_sentence_length': 21.46590909090909, 'pct_complex_words': 0.6977236633139227, 'fog_index': 8.865453101689205, 'avg_words_per_sentence': 21.46590909090909, 'complex_word_count': 1318, 'word_count': 1889, 'avg_syllables_per_word': 1.413446267866596, 'personal_pronoun_count': 35, 'avg_word_length': 4.424563260984648}

```

In [173..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('75.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.18127413127413128, 'negative_score': 0.8187258687258687, 'polarity_score': 0.18127413127413128, 'subjectivity_score': 0.46178596178596193, 'avg_sentence_length': 18.369230769230768, 'pct_complex_words': 0.6934673366834171, 'fog_index': 7.625079242365674, 'avg_words_per_sentence': 18.369230769230768, 'complex_word_count': 828, 'word_count': 1194, 'avg_syllables_per_word': 1.390284757118928, 'personal_pronoun_count': 50, 'avg_word_length': 4.304857621440536}

```

In [174]...

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'pct_complex_words': pct_complex_words,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('76.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.21869990570485626, 'negative_score': 0.7813000942951438, 'polarity_score': 0.21869990570485626, 'subjectivity_score': 0.42125766148043375, 'avg_sentence_length': 26.405797101449274, 'pct_complex_words': 0.6739846322722283, 'fog_index': 10.831912693488603, 'avg_words_per_sentence': 26.405797101449274, 'complex_word_count': 1228, 'word_count': 1822, 'avg_syllables_per_word': 1.3649835345773875, 'personal_pronoun_count': 59, 'avg_word_length': 4.202524698133919}

```

In [175]..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('77.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.26312695924764884, 'negative_score': 0.7368730407523512, 'polarity_score': 0.26312695924764884, 'subjectivity_score': 0.48983616957754916, 'avg_sentence_length': 38.05263157894737, 'pct_complex_words': 0.677731673582296, 'fog_index': 15.492145301011867, 'avg_words_per_sentence': 38.05263157894737, 'complex_word_count': 490, 'word_count': 723, 'avg_syllables_per_word': 1.4785615491009683, 'personal_pronoun_count': 29, 'avg_word_length': 4.515905947441217}

```

In [176]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('78.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.10740724770021645, 'negative_score': 0.8925927522997835, 'polarity_score': 0.10740724770021645, 'subjectivity_score': 0.46323945585664317, 'avg_sentence_length': 27.70833333333332, 'pct_complex_words': 0.7007518796992481, 'fog_index': 11.363634085213032, 'avg_words_per_sentence': 27.70833333333332, 'complex_word_count': 1398, 'word_count': 1995, 'avg_syllables_per_word': 1.4972431077694235, 'personal_pronoun_count': 27, 'avg_word_length': 4.705764411027569}

```

In [177]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('79.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.09396600778676249, 'negative_score': 0.906039922132375, 'polarity_score': 0.09396600778676249, 'subjectivity_score': 0.5680772686433064, 'avg_sentence_length': 16.975, 'pct_complex_words': 0.6782032400589102, 'fog_index': 7.061281296023565, 'avg_words_per_sentence': 16.975, 'complex_word_count': 921, 'word_count': 1358, 'avg_syllables_per_word': 1.3807069219440353, 'personal_pronoun_count': 78, 'avg_word_length': 4.274668630338733}
```

In [178]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('80.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.26875920471281306, 'negative_score': 0.7312407952871869, 'polarity_score': 0.26875920471281306, 'subjectivity_score': 0.6175257731958762, 'avg_sentence_length': 18.6, 'pct_complex_words': 0.6908602150537635, 'fog_index': 7.716344086021507, 'avg_words_per_sentence': 18.6, 'complex_word_count': 1028, 'word_count': 1488, 'avg_syllables_per_word': 1.3434139784946237, 'personal_pronoun_count': 80, 'avg_word_length': 4.23252688172043}
```

In [179]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('81.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1065455089983392, 'negative_score': 0.8934544910016609, 'polarity_score': 0.1065455089983392, 'subjectivity_score': 0.4141528178320631, 'avg_sentence_length': 32.52173913043478, 'pct_complex_words': 0.7633689839572193, 'fog_index': 13.314043245756801, 'avg_words_per_sentence': 32.52173913043478, 'complex_word_count': 1142, 'word_count': 1496, 'avg_syllables_per_word': 1.3970588235294117, 'personal_pronoun_count': 15, 'avg_word_length': 4.705882352941177}

```

In [180...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('82.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.10204177897574125, 'negative_score': 0.8979582210242587, 'polarity_score': 0.10204177897574125, 'subjectivity_score': 0.36186902719921604, 'avg_sentence_length': 22.36144578313253, 'pct_complex_words': 0.6858836206896551, 'fog_index': 9.218931761528875, 'avg_words_per_sentence': 22.36144578313253, 'complex_word_count': 1273, 'word_count': 1856, 'avg_syllables_per_word': 1.4935344827586208, 'personal_pronoun_count': 30, 'avg_word_length': 4.683728448275862}
```

```
In [181]: import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('83.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.07728418267891951, 'negative_score': 0.9227158173210805, 'polarity_score': 0.07728418267891951, 'subjectivity_score': 0.548826232247285, 'avg_sentence_length': 16.741176470588236, 'pct_complex_words': 0.6844694307800422, 'fog_index': 6.970258360547311, 'avg_words_per_sentence': 16.741176470588236, 'complex_word_count': 974, 'word_count': 1423, 'avg_syllables_per_word': 1.3942375263527758, 'personal_pronoun_count': 78, 'avg_word_length': 4.34574841883345}

```

In [182...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('84.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.04207553275349885, 'negative_score': 0.9579244672465012, 'polarity_score': 0.04207553275349885, 'subjectivity_score': 0.44910701978498596, 'avg_sentence_length': 34.19642857142857, 'pct_complex_words': 0.7211488250652741, 'fog_index': 13.96703095897537, 'avg_words_per_sentence': 34.19642857142857, 'complex_word_count': 1381, 'word_count': 1915, 'avg_syllables_per_word': 1.4198433420365535, 'personal_pronoun_count': 56, 'avg_word_length': 4.536814621409921}

```

In [183..]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('85.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.08438306303977945, 'negative_score': 0.9156169369602205, 'polarity_score': 0.08438306303977945, 'subjectivity_score': 0.4048454199200467, 'avg_sentence_length': 45.869565217391305, 'pct_complex_words': 0.7364928909952607, 'fog_index': 18.642423243354624, 'avg_words_per_sentence': 45.869565217391305, 'complex_word_count': 777, 'word_count': 1055, 'avg_syllables_per_word': 1.5033175355450237, 'personal_pronoun_count': 9, 'avg_word_length': 4.890995260663507}

```

In [184...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('86.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.07141402015351592, 'negative_score': 0.928585979846484, 'polarity_score': 0.07141402015351592, 'subjectivity_score': 0.39265958131504336, 'avg_sentence_length': 37.925, 'pct_complex_words': 0.7310481212920237, 'fog_index': 15.46241924851681, 'avg_words_per_sentence': 37.925, 'complex_word_count': 1109, 'word_count': 1517, 'avg_syllables_per_word': 1.5339485827290706, 'personal_pronoun_count': 12, 'avg_word_length': 4.949241924851681}
```

In [185]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language

```

```

dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('87.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.08501227308045488, 'negative_score': 0.9149877269195451, 'polarity_score': 0.08501227308045488, 'subjectivity_score': 0.4146742185553374, 'avg_sentence_length': 28.85135135135135, 'pct_complex_words': 0.7180327868852459, 'fog_index': 11.82775365529464, 'avg_words_per_sentence': 28.85135135135135, 'complex_word_count': 1533, 'word_count': 2135, 'avg_syllables_per_word': 1.455737704918033, 'personal_pronoun_count': 34, 'avg_word_length': 4.6679156908665105}

```

In [186..

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('88.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)
```

```
{'positive_score': 0.05545700004462891, 'negative_score': 0.944542999955371, 'polarity_score': 0.05545700004462891, 'subjectivity_score': 0.3343701401691093, 'avg_sentence_length': 20.895, 'pct_complex_words': 0.697056712132089, 'fog_index': 8.636822684852836, 'avg_words_per_sentence': 20.895, 'complex_word_count': 2913, 'word_count': 4179, 'avg_syllables_per_word': 1.3948312993539125, 'personal_pronoun_count': 4, 'avg_word_length': 4.399377841588897}
```

In [187...]

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('89.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.02626329981551501, 'negative_score': 0.973736700184485, 'polarity_score': 0.02626329981551501, 'subjectivity_score': 0.4549618700568068, 'avg_sentence_length': 23.65934065934066, 'pct_complex_words': 0.7120297259637715, 'fog_index': 9.748548154121773, 'avg_words_per_sentence': 23.65934065934066, 'complex_word_count': 1533, 'word_count': 2153, 'avg_syllables_per_word': 1.4626103111936832, 'personal_pronoun_count': 35, 'avg_word_length': 4.676730143985137}

```

In [188]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('90.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.02550675215769555, 'negative_score': 0.9744932478423044, 'polarity_score': 0.02550675215769555, 'subjectivity_score': 0.3751143510577471, 'avg_sentence_length': 28.294117647058822, 'pct_complex_words': 0.7271309771309772, 'fog_index': 11.60849944967592, 'avg_words_per_sentence': 28.294117647058822, 'complex_word_count': 1399, 'word_count': 1924, 'avg_syllables_per_word': 1.5654885654885655, 'personal_pronoun_count': 10, 'avg_word_length': 5.025987525987526}

```

In [189...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'word_count': word_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('91.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.23095463564213561, 'negative_score': 0.7690453643578644, 'polarity_score': 0.23095463564213561, 'subjectivity_score': 0.4396983225108226, 'avg_sentence_length': 40.9, 'pct_complex_words': 0.7188264058679706, 'fog_index': 16.64753056234719, 'avg_words_per_sentence': 40.9, 'complex_word_count': 294, 'word_count': 409, 'avg_syllables_per_word': 1.4938875305623471, 'personal_pronoun_count': 13, 'avg_word_length': 4.767726161369193}

```

In [190..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('92.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.17069554673721343, 'negative_score': 0.8293044532627866, 'polarity_score': 0.17069554673721343, 'subjectivity_score': 0.48944554673721336, 'avg_sentence_length': 28.346938775510203, 'pct_complex_words': 0.6846652267818575, 'fog_index': 11.612641600916824, 'avg_words_per_sentence': 28.346938775510203, 'complex_word_count': 951, 'word_count': 1389, 'avg_syllables_per_word': 1.394528437724982, 'personal_pronoun_count': 31, 'avg_word_length': 4.4053275737940965}

```

In [191..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('93.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.11474409271284276, 'negative_score': 0.8852559072871572, 'polarity_score': 0.11474409271284276, 'subjectivity_score': 0.42648245851370825, 'avg_sentence_length': 17.700787401574804, 'pct_complex_words': 0.7411032028469751, 'fog_index': 7.376756241768712, 'avg_words_per_sentence': 17.700787401574804, 'complex_word_count': 1666, 'word_count': 2248, 'avg_syllables_per_word': 1.4452846975088969, 'personal_pronoun_count': 48, 'avg_word_length': 4.540480427046264}

```

In [192]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('94.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.15650064264818372, 'negative_score': 0.8434993573518162, 'polarity_score': 0.15650064264818372, 'subjectivity_score': 0.4226629533186913, 'avg_sentence_length': 22.602040816326532, 'pct_complex_words': 0.7033860045146727, 'fog_index': 9.322170728336483, 'avg_words_per_sentence': 22.602040816326532, 'complex_word_count': 1558, 'word_count': 2215, 'avg_syllables_per_word': 1.4618510158013545, 'personal_pronoun_count': 55, 'avg_word_length': 4.590970654627539}

```

In [193...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('96.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.03880882146368872, 'negative_score': 0.9611911785363113, 'polarity_score': 0.03880882146368872, 'subjectivity_score': 0.412307908414103, 'avg_sentence_length': 34.58730158730159, 'pct_complex_words': 0.7200550711335475, 'fog_index': 14.122942663374056, 'avg_words_per_sentence': 34.58730158730159, 'complex_word_count': 1569, 'word_count': 2179, 'avg_syllables_per_word': 1.5617255621844883, 'personal_pronoun_count': 14, 'avg_word_length': 4.887563102340523}
```

In [194..]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('97.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.0979487356958287, 'negative_score': 0.9020512643041713, 'polarity_score': 0.0979487356958287, 'subjectivity_score': 0.4587200073827979, 'avg_sentence_length': 24.73076923076923, 'pct_complex_words': 0.7153965785381027, 'fog_index': 10.178466323722933, 'avg_words_per_sentence': 24.73076923076923, 'complex_word_count': 920, 'word_count': 1286, 'avg_syllables_per_word': 1.47900466562986, 'personal_pronoun_count': 18, 'avg_word_length': 4.674183514774494}

```

In [195...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('98.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

{'positive\_score': 0.1158354023427553, 'negative\_score': 0.8841645976572448, 'polarity\_score': 0.1158354023427553, 'subjectivity\_score': 0.4590706964604026, 'avg\_sentence\_length': 21.01333333333332, 'pct\_complex\_words': 0.7138324873096447, 'fog\_index': 8.690866328257192, 'avg\_words\_per\_sentence': 21.01333333333332, 'complex\_word\_count': 1125, 'word\_count': 1576, 'avg\_syllables\_per\_word': 1.3934010152284264, 'personal\_pronoun\_count': 57, 'avg\_word\_length': 4.477157360406092}

In [196]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('99.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.08418967904855004, 'negative_score': 0.91581032095145, 'polarity_score': 0.08418967904855004, 'subjectivity_score': 0.44234074617139113, 'avg_sentence_length': 34.5, 'pct_complex_words': 0.7442028985507246, 'fog_index': 14.09768115942029, 'avg_words_per_sentence': 34.5, 'complex_word_count': 1027, 'word_count': 1380, 'avg_syllables_per_word': 1.4978260869565216, 'personal_pronoun_count': 30, 'avg_word_length': 4.742028985507246}
```

In [197...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('100.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.0902962239583335, 'negative_score': 0.9097037760416666, 'polarity_score': 0.0902962239583335, 'subjectivity_score': 0.33619528619528616, 'avg_sentence_length': 28.779661016949152, 'pct_complex_words': 0.6937573616018846, 'fog_index': 11.789367351420417, 'avg_words_per_sentence': 28.779661016949152, 'complex_word_count': 1178, 'word_count': 1698, 'avg_syllables_per_word': 1.5011778563015312, 'personal_pronoun_count': 14, 'avg_word_length': 4.747349823321555}

```

In [198]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('101.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.20020041686708354, 'negative_score': 0.7997995831329164, 'polarity_score': 0.20020041686708354, 'subjectivity_score': 0.4357503607503609, 'avg_sentence_length': 27.6, 'pct_complex_words': 0.7028985507246377, 'fog_index': 11.321159420289856, 'avg_words_per_sentence': 27.6, 'complex_word_count': 291, 'word_count': 414, 'avg_syllables_per_word': 1.4106280193236715, 'personal_pronoun_count': 10, 'avg_word_length': 4.46376815942029}

```

In [199...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('102.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

{'positive\_score': 0.0704867943504307, 'negative\_score': 0.9295132056495693, 'polarity\_score': 0.0704867943504307, 'subjectivity\_score': 0.43299991254536696, 'avg\_sentence\_length': 22.184615384615384, 'pct\_complex\_words': 0.6962552011095701, 'fog\_index': 9.152348234289981, 'avg\_words\_per\_sentence': 22.184615384615384, 'complex\_word\_count': 1004, 'word\_count': 1442, 'avg\_syllables\_per\_word': 1.4042995839112344, 'personal\_pronoun\_count': 46, 'avg\_word\_length': 4.44382801664355}

In [200]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language

```

```

dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('103.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.05734459254196096, 'negative_score': 0.942655407458039, 'polarity_score': 0.05734459254196096, 'subjectivity_score': 0.3977772592904172, 'avg_sentence_length': 24.789473684210527, 'pct_complex_words': 0.6825902335456475, 'fog_index': 10.18882556710247, 'avg_words_per_sentence': 24.789473684210527, 'complex_word_count': 643, 'word_count': 942, 'avg_syllables_per_word': 1.464968152866242, 'personal_pronoun_count': 14, 'avg_word_length': 4.562632696390658}

```

In [201]

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('104.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)
```

```
{'positive_score': 0.0549660031326698, 'negative_score': 0.9450339968673303, 'polarity_score': 0.0549660031326698, 'subjectivity_score': 0.3963573956907288, 'avg_sentence_length': 26.24074074074074, 'pct_complex_words': 0.7374735356386732, 'fog_index': 10.791285710551767, 'avg_words_per_sentence': 26.24074074074074, 'complex_word_count': 1045, 'word_count': 1417, 'avg_syllables_per_word': 1.5864502470007058, 'personal_pronoun_count': 7, 'avg_word_length': 4.971771347918137}
```

In [202]:

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('105.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.07498860182370821, 'negative_score': 0.9250113981762917, 'polarity_score': 0.07498860182370821, 'subjectivity_score': 0.4283322617099213, 'avg_sentence_length': 34.02439024390244, 'pct_complex_words': 0.7118279569892473, 'fog_index': 13.894487280356675, 'avg_words_per_sentence': 34.02439024390244, 'complex_word_count': 993, 'word_count': 1395, 'avg_syllables_per_word': 1.4086021505376345, 'personal_pronoun_count': 30, 'avg_word_length': 4.43010752688172}

```

In [203]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('106.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.10222789115646258, 'negative_score': 0.8977721088435374, 'polarity_score': 0.10222789115646258, 'subjectivity_score': 0.37190476190476196, 'avg_sentence_length': 43.73333333333334, 'pct_complex_words': 0.7240853658536586, 'fog_index': 17.7829674796748, 'avg_words_per_sentence': 43.73333333333334, 'complex_word_count': 475, 'word_count': 656, 'avg_syllables_per_word': 1.608231707317073, 'personal_pronoun_count': 6, 'avg_word_length': 5.059451219512195}

```

In [204]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'avg_word_length': avg_word_length,
        'word_count': word_count,
        'syllable_count': syllable_count,
        'personal_pronoun_count': personal_pronoun_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('107.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.10215207631874301, 'negative_score': 0.897847923681257, 'polarity_score': 0.10215207631874301, 'subjectivity_score': 0.3777020202020202, 'avg_sentence_length': 27.176470588235293, 'pct_complex_words': 0.7132034632034632, 'fog_index': 11.155869620575503, 'avg_words_per_sentence': 27.176470588235293, 'complex_word_count': 659, 'word_count': 924, 'avg_syllables_per_word': 1.4307359307359306, 'personal_pronoun_count': 16, 'avg_word_length': 4.538961038961039}

```

In [205..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('108.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.09144111644111648, 'negative_score': 0.9085588835588835, 'polarity_score': 0.0914411164411648, 'subjectivity_score': 0.4255590005590005, 'avg_sentence_length': 41.02857142857143, 'pct_complex_words': 0.7172701949860725, 'fog_index': 16.698336649423002, 'avg_words_per_sentence': 41.02857142857143, 'complex_word_count': 1030, 'word_count': 1436, 'avg_syllables_per_word': 1.50974930362117, 'personal_pronoun_count': 12, 'avg_word_length': 4.809888579387187}

```

In [206..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('109.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.2217877668308703, 'negative_score': 0.7782122331691297, 'polarity_score': 0.2217877668308703, 'subjectivity_score': 0.5413587848932676, 'avg_sentence_length': 29.5, 'pct_complex_words': 0.6879361914257228, 'fog_index': 12.07517447657029, 'avg_words_per_sentence': 29.5, 'complex_word_count': 690, 'word_count': 1003, 'avg_syllables_per_word': 1.2821535393818544, 'personal_pronoun_count': 62, 'avg_word_length': 4.102691924227318}

```

In [207...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('110.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.048902233149805976, 'negative_score': 0.951097766850194, 'polarity_score': 0.048902233149805976, 'subjectivity_score': 0.3426136538757899, 'avg_sentence_length': 27.11764705882353, 'pct_complex_words': 0.7469269703543022, 'fog_index': 11.145829611671132, 'avg_words_per_sentence': 27.11764705882353, 'complex_word_count': 1033, 'word_count': 1383, 'avg_syllables_per_word': 1.4569775849602313, 'personal_pronoun_count': 2, 'avg_word_length': 4.752711496746204}

```

In [208...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('111.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.07176991185143358, 'negative_score': 0.9282300881485664, 'polarity_score': 0.07176991185143358, 'subjectivity_score': 0.46687135328439666, 'avg_sentence_length': 24.454545454545453, 'pct_complex_words': 0.7591078066914498, 'fog_index': 10.085461304494762, 'avg_words_per_sentence': 24.454545454545453, 'complex_word_count': 1021, 'word_count': 1345, 'avg_syllables_per_word': 1.4907063197026023, 'personal_pronoun_count': 16, 'avg_word_length': 4.879553903345725}
```

In [209]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('112.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.12085901027077496, 'negative_score': 0.879140989729225, 'polarity_score': 0.12085901027077496, 'subjectivity_score': 0.4265639589169001, 'avg_sentence_length': 24.821428571428573, 'pct_complex_words': 0.7215827338129497, 'fog_index': 10.217204522096608, 'avg_words_per_sentence': 24.821428571428573, 'complex_word_count': 1003, 'word_count': 1390, 'avg_syllables_per_word': 1.5093525179856115, 'personal_pronoun_count': 16, 'avg_word_length': 4.848201438848921}

```

In [210]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('113.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.06038257135818112, 'negative_score': 0.9396174286418189, 'polarity_score': 0.06038257135818112, 'subjectivity_score': 0.3934239022043899, 'avg_sentence_length': 28.789473684210527, 'pct_complex_words': 0.7062766605728215, 'fog_index': 11.79830013791334, 'avg_words_per_sentence': 28.789473684210527, 'complex_word_count': 1159, 'word_count': 1641, 'avg_syllables_per_word': 1.4868982327848872, 'personal_pronoun_count': 20, 'avg_word_length': 4.597196831200487}
```

In [211]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('104.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.0549660031326698, 'negative_score': 0.9450339968673303, 'polarity_score': 0.0549660031326698, 'subjectivity_score': 0.3963573956907288, 'avg_sentence_length': 26.24074074074074, 'pct_complex_words': 0.7374735356386732, 'fog_index': 10.791285710551767, 'avg_words_per_sentence': 26.24074074074074, 'complex_word_count': 1045, 'word_count': 1417, 'avg_syllables_per_word': 1.5864502470007058, 'personal_pronoun_count': 7, 'avg_word_length': 4.971771347918137}

```

In [212]...

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('105.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.07498860182370821, 'negative_score': 0.9250113981762917, 'polarity_score': 0.07498860182370821, 'subjectivity_score': 0.4283322617099213, 'avg_sentence_length': 34.02439024390244, 'pct_complex_words': 0.7118279569892473, 'fog_index': 13.894487280356675, 'avg_words_per_sentence': 34.02439024390244, 'complex_word_count': 993, 'word_count': 1395, 'avg_syllables_per_word': 1.4086021505376345, 'personal_pronoun_count': 30, 'avg_word_length': 4.43010752688172}
```

In [213]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('106.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.10222789115646258, 'negative_score': 0.8977721088435374, 'polarity_score': 0.10222789115646258, 'subjectivity_score': 0.37190476190476196, 'avg_sentence_length': 43.73333333333334, 'pct_complex_words': 0.7240853658536586, 'fog_index': 17.7829674796748, 'avg_words_per_sentence': 43.73333333333334, 'complex_word_count': 475, 'word_count': 656, 'avg_syllables_per_word': 1.608231707317073, 'personal_pronoun_count': 6, 'avg_word_length': 5.059451219512195}

```

In [214...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('107.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.10215207631874301, 'negative_score': 0.897847923681257, 'polarity_score': 0.10215207631874301, 'subjectivity_score': 0.3777020202020202, 'avg_sentence_length': 27.176470588235293, 'pct_complex_words': 0.7132034632034632, 'fog_index': 11.155869620575503, 'avg_words_per_sentence': 27.176470588235293, 'complex_word_count': 659, 'word_count': 924, 'avg_syllables_per_word': 1.4307359307359306, 'personal_pronoun_count': 16, 'avg_word_length': 4.538961038961039}

```

In [215]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language

```

```

dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('108.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.09144111644111648, 'negative_score': 0.9085588835588835, 'polarity_score': 0.0914411164411648, 'subjectivity_score': 0.4255590005590005, 'avg_sentence_length': 41.02857142857143, 'pct_complex_words': 0.7172701949860725, 'fog_index': 16.698336649423002, 'avg_words_per_sentence': 41.02857142857143, 'complex_word_count': 1030, 'word_count': 1436, 'avg_syllables_per_word': 1.50974930362117, 'personal_pronoun_count': 12, 'avg_word_length': 4.809888579387187}

```

In [216..

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('109.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)
```

```
{'positive_score': 0.2217877668308703, 'negative_score': 0.7782122331691297, 'polarity_score': 0.2217877668308703, 'subjectivity_score': 0.5413587848932676, 'avg_sentence_length': 29.5, 'pct_complex_words': 0.6879361914257228, 'fog_index': 12.07517447657029, 'avg_words_per_sentence': 29.5, 'complex_word_count': 690, 'word_count': 1003, 'avg_syllables_per_word': 1.2821535393818544, 'personal_pronoun_count': 62, 'avg_word_length': 4.102691924227318}
```

In [217]:

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('110.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.048902233149805976, 'negative_score': 0.951097766850194, 'polarity_score': 0.048902233149805976, 'subjectivity_score': 0.3426136538757899, 'avg_sentence_length': 27.11764705882353, 'pct_complex_words': 0.7469269703543022, 'fog_index': 11.145829611671132, 'avg_words_per_sentence': 27.11764705882353, 'complex_word_count': 1033, 'word_count': 1383, 'avg_syllables_per_word': 1.4569775849602313, 'personal_pronoun_count': 2, 'avg_word_length': 4.752711496746204}

```

In [218]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

    with open('111.txt', 'r', encoding=result['encoding']) as file:
        text = file.read()

    variables = compute_text_variables(text)
    print(variables)

{'positive_score': 0.07176991185143358, 'negative_score': 0.9282300881485664, 'polarity_score': 0.07176991185143358, 'subjectivity_score': 0.46687135328439666, 'avg_sentence_length': 24.454545454545453, 'pct_complex_words': 0.7591078066914498, 'fog_index': 10.085461304494762, 'avg_words_per_sentence': 24.454545454545453, 'complex_word_count': 1021, 'word_count': 1345, 'avg_syllables_per_word': 1.4907063197026023, 'personal_pronoun_count': 16, 'avg_word_length': 4.879553903345725}

```

In [219...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'avg_word_length': avg_word_length,
        'word_count': word_count,
        'syllable_count': syllable_count,
        'personal_pronoun_count': personal_pronoun_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('112.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.12085901027077496, 'negative_score': 0.879140989729225, 'polarity_score': 0.12085901027077496, 'subjectivity_score': 0.4265639589169001, 'avg_sentence_length': 24.821428571428573, 'pct_complex_words': 0.7215827338129497, 'fog_index': 10.217204522096608, 'avg_words_per_sentence': 24.821428571428573, 'complex_word_count': 1003, 'word_count': 1390, 'avg_syllables_per_word': 1.5093525179856115, 'personal_pronoun_count': 16, 'avg_word_length': 4.848201438848921}
```

In [220]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('113.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.06038257135818112, 'negative_score': 0.9396174286418189, 'polarity_score': 0.06038257135818112, 'subjectivity_score': 0.3934239022043899, 'avg_sentence_length': 28.789473684210527, 'pct_complex_words': 0.7062766605728215, 'fog_index': 11.79830013791334, 'avg_words_per_sentence': 28.789473684210527, 'complex_word_count': 1159, 'word_count': 1641, 'avg_syllables_per_word': 1.4868982327848872, 'personal_pronoun_count': 20, 'avg_word_length': 4.597196831200487}

```

In [221..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('114.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.03898280110942448, 'negative_score': 0.9610171988905756, 'polarity_score': 0.03898280110942448, 'subjectivity_score': 0.4681558394707746, 'avg_sentence_length': 25.87837837837838, 'pct_complex_words': 0.7112271540469974, 'fog_index': 10.635842212970152, 'avg_words_per_sentence': 25.87837837837838, 'complex_word_count': 1362, 'word_count': 1915, 'avg_syllables_per_word': 1.458485639686684, 'personal_pronoun_count': 18, 'avg_word_length': 4.530026109660574}

```

In [222...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('115.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': -0.0031670655451143254, 'negative_score': 1.0031670655451144, 'polarity_score': -0.0031670655451143254, 'subjectivity_score': 0.3707906005466981, 'avg_sentence_length': 28.371794871794872, 'pct_complex_words': 0.7243560777225486, 'fog_index': 11.63846037980697, 'avg_words_per_sentence': 28.371794871794872, 'complex_word_count': 1603, 'word_count': 2213, 'avg_syllables_per_word': 1.5029371893357433, 'personal_pronoun_count': 19, 'avg_word_length': 4.696791685494803}

```

In [223...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('116.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.08454206701157918, 'negative_score': 0.9154579329884208, 'polarity_score': 0.08454206701157918, 'subjectivity_score': 0.488726331256819, 'avg_sentence_length': 74.53333333333333, 'pct_complex_words': 0.7307692307692307, 'fog_index': 30.105641025641024, 'avg_words_per_sentence': 74.53333333333333, 'complex_word_count': 817, 'word_count': 1118, 'avg_syllables_per_word': 1.3076923076923077, 'personal_pronoun_count': 63, 'avg_word_length': 4.275491949910554}

```

In [224]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('117.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.06475177304964537, 'negative_score': 0.9352482269503546, 'polarity_score': 0.06475177304964537, 'subjectivity_score': 0.4489885173927728, 'avg_sentence_length': 33.12676056338028, 'pct_complex_words': 0.7266156462585034, 'fog_index': 13.541350483855513, 'avg_words_per_sentence': 33.12676056338028, 'complex_word_count': 1709, 'word_count': 2352, 'avg_syllables_per_word': 1.5, 'personal_pronoun_count': 28, 'avg_word_length': 4.816751700680272}

```

In [225...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('118.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.11033405051369123, 'negative_score': 0.8896659494863087, 'polarity_score': 0.11033405051369123, 'subjectivity_score': 0.5087594973223717, 'avg_sentence_length': 20.17283950617284, 'pct_complex_words': 0.6964504283965728, 'fog_index': 8.347715973827766, 'avg_words_per_sentence': 20.17283950617284, 'complex_word_count': 1138, 'word_count': 1634, 'avg_syllables_per_word': 1.3170134638922888, 'personal_pronoun_count': 55, 'avg_word_length': 4.2368421052631575}
```

In [226]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
}

with open('119.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.09937229437229438, 'negative_score': 0.9006277056277057, 'polarity_score': 0.09937229437229438, 'subjectivity_score': 0.4741774891774891, 'avg_sentence_length': 29.5, 'pct_complex_words': 0.7084745762711865, 'fog_index': 12.083389830508475, 'avg_words_per_sentence': 29.5, 'complex_word_count': 418, 'word_count': 590, 'avg_syllables_per_word': 1.5864406779661018, 'personal_pronoun_count': 5, 'avg_word_length': 4.9932203389830505}
```

In [227...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('120.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.03663369929936196, 'negative_score': 0.963366300700638, 'polarity_score': 0.03663369929936196, 'subjectivity_score': 0.3277423112362873, 'avg_sentence_length': 28.494505494505493, 'pct_complex_words': 0.7508677207867335, 'fog_index': 11.698149286116891, 'avg_words_per_sentence': 28.494505494505493, 'complex_word_count': 1947, 'word_count': 2593, 'avg_syllables_per_word': 1.5071345931353644, 'personal_pronoun_count': 18, 'avg_word_length': 4.799074431160817}

```

In [228]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('121.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.03663369929936196, 'negative_score': 0.963366300700638, 'polarity_score': 0.03663369929936196, 'subjectivity_score': 0.3277423112362873, 'avg_sentence_length': 28.494505494505493, 'pct_complex_words': 0.7508677207867335, 'fog_index': 11.698149286116891, 'avg_words_per_sentence': 28.494505494505493, 'complex_word_count': 1947, 'word_count': 2593, 'avg_syllables_per_word': 1.5071345931353644, 'personal_pronoun_count': 18, 'avg_word_length': 4.799074431160817}

```

In [229...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('122.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

{'positive\_score': 0.07920047817106639, 'negative\_score': 0.9207995218289337, 'polarity\_score': 0.07920047817106639, 'subjectivity\_score': 0.4322908355261297, 'avg\_sentence\_length': 24.46590909090909, 'pct\_complex\_words': 0.7152810032512773, 'fog\_index': 10.072476037664147, 'avg\_words\_per\_sentence': 24.46590909090909, 'complex\_word\_count': 1540, 'word\_count': 2153, 'avg\_syllables\_per\_word': 1.437993497445425, 'personal\_pronoun\_count': 38, 'avg\_word\_length': 4.522526706920576}

In [230]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language

```

```

dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('123.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.10509119503128721, 'negative_score': 0.8949088049687128, 'polarity_score': 0.10509119503128721, 'subjectivity_score': 0.4288409685552546, 'avg_sentence_length': 29.29333333333333, 'pct_complex_words': 0.7196176604460628, 'fog_index': 12.005180397511758, 'avg_words_per_sentence': 29.29333333333333, 'complex_word_count': 1581, 'word_count': 2197, 'avg_syllables_per_word': 1.4346836595357306, 'personal_pronoun_count': 34, 'avg_word_length': 4.635867091488393}

```

In [231...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('124.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.08345131879614638, 'negative_score': 0.9165486812038536, 'polarity_score': 0.08345131879614638, 'subjectivity_score': 0.3958568969344833, 'avg_sentence_length': 35.26865671641791, 'pct_complex_words': 0.7232331781633516, 'fog_index': 14.396755957832506, 'avg_words_per_sentence': 35.26865671641791, 'complex_word_count': 1709, 'word_count': 2363, 'avg_syllables_per_word': 1.5374523910283537, 'personal_pronoun_count': 16, 'avg_word_length': 4.856961489631824}
```

In [232]:

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('126.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.06958308575955634, 'negative_score': 0.9304169142404437, 'polarity_score': 0.0695830857595634, 'subjectivity_score': 0.4123249299719889, 'avg_sentence_length': 31.135135135135137, 'pct_complex_words': 0.7048611111111112, 'fog_index': 12.7359984984985, 'avg_words_per_sentence': 31.135135135135137, 'complex_word_count': 812, 'word_count': 1152, 'avg_syllables_per_word': 1.484375, 'personal_pronoun_count': 12, 'avg_word_length': 4.657118055555555}

```

In [233]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('127.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.03345162748643761, 'negative_score': 0.9665483725135624, 'polarity_score': 0.03345162748643761, 'subjectivity_score': 0.4445961422543702, 'avg_sentence_length': 29.397058823529413, 'pct_complex_words': 0.7178589294647324, 'fog_index': 12.04596710119766, 'avg_words_per_sentence': 29.397058823529413, 'complex_word_count': 1435, 'word_count': 1999, 'avg_syllables_per_word': 1.514257128564282, 'personal_pronoun_count': 27, 'avg_word_length': 4.784892446223112}

```

In [234...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'avg_word_length': avg_word_length,
        'personal_pronoun_count': personal_pronoun_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('128.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.19251068376068375, 'negative_score': 0.8074893162393162, 'polarity_score': 0.19251068376068375, 'subjectivity_score': 0.521832264957265, 'avg_sentence_length': 28.41304347826087, 'pct_complex_words': 0.675592960979342, 'fog_index': 11.635454575696086, 'avg_words_per_sentence': 28.41304347826087, 'complex_word_count': 883, 'word_count': 1307, 'avg_syllables_per_word': 1.4185156847742924, 'personal_pronoun_count': 46, 'avg_word_length': 4.5126243305279266}

```

In [235..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('129.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.09083397945338241, 'negative_score': 0.9091660205466175, 'polarity_score': 0.09083397945338241, 'subjectivity_score': 0.4269537054984815, 'avg_sentence_length': 30.838709677419356, 'pct_complex_words': 0.7332635983263598, 'fog_index': 12.628789310298288, 'avg_words_per_sentence': 30.838709677419356, 'complex_word_count': 701, 'word_count': 956, 'avg_syllables_per_word': 1.5156903765690377, 'personal_pronoun_count': 5, 'avg_word_length': 4.97071129707113}

```

In [236]..

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('130.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.021734619773835454, 'negative_score': 0.9782653802261645, 'polarity_score': 0.021734619773835454, 'subjectivity_score': 0.40425355327316104, 'avg_sentence_length': 38.907407407407405, 'pct_complex_word_s': 0.7072822465492623, 'fog_index': 15.845875861582668, 'avg_words_per_sentence': 38.907407407407405, 'complex_word_count': 1486, 'word_count': 2101, 'avg_syllables_per_word': 1.455497382198953, 'personal_pronoun_count': 6, 'avg_word_length': 4.75963826749167}

```

In [237]...

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('131.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1394689754689754, 'negative_score': 0.8605310245310246, 'polarity_score': 0.1394689754689754, 'subjectivity_score': 0.4605312665729333, 'avg_sentence_length': 29.7972972972973, 'pct_complex_words': 0.7215419501133787, 'fog_index': 12.207535698964271, 'avg_words_per_sentence': 29.7972972972973, 'complex_word_count': 1591, 'word_count': 2205, 'avg_syllables_per_word': 1.5029478458049887, 'personal_pronoun_count': 32, 'avg_word_length': 4.791836734693877}

```

In [238]...

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('132.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.08195420592479415, 'negative_score': 0.9180457940752058, 'polarity_score': 0.08195420592479415, 'subjectivity_score': 0.42110292601889243, 'avg_sentence_length': 27.53125, 'pct_complex_words': 0.6969353007945517, 'fog_index': 11.291274120317821, 'avg_words_per_sentence': 27.53125, 'complex_word_count': 1228, 'word_count': 1762, 'avg_syllables_per_word': 1.492622020431328, 'personal_pronoun_count': 36, 'avg_word_length': 4.721906923950057}
```

In [241]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('133.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.06253985639527807, 'negative_score': 0.937460143604722, 'polarity_score': 0.06253985639527807, 'subjectivity_score': 0.4504028234148715, 'avg_sentence_length': 32.02439024390244, 'pct_complex_words': 0.7440974866717441, 'fog_index': 13.107395092229673, 'avg_words_per_sentence': 32.02439024390244, 'complex_word_count': 977, 'word_count': 1313, 'avg_syllables_per_word': 1.651942117288652, 'personal_pronoun_count': 13, 'avg_word_length': 5.260472201066261}
```

In [240]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('134.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.07408272621687255, 'negative_score': 0.9259172737831275, 'polarity_score': 0.07408272621687255, 'subjectivity_score': 0.3396974976243269, 'avg_sentence_length': 41.4375, 'pct_complex_words': 0.716440422327753, 'fog_index': 16.861576168929112, 'avg_words_per_sentence': 41.4375, 'complex_word_count': 475, 'word_count': 663, 'avg_syllables_per_word': 1.654600301659125, 'personal_pronoun_count': 8, 'avg_word_length': 5.170437405731524}
```

In [242]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('135.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.1693655303030303, 'negative_score': 0.8306344696969696, 'polarity_score': 0.1693655303030303, 'subjectivity_score': 0.3634232954545454, 'avg_sentence_length': 29.285714285714285, 'pct_complex_words': 0.6991869918699187, 'fog_index': 11.993960511033682, 'avg_words_per_sentence': 29.285714285714285, 'complex_word_count': 430, 'word_count': 615, 'avg_syllables_per_word': 1.4357723577235773, 'personal_pronoun_count': 11, 'avg_word_length': 4.611382113821138}

```

In [243]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

```

```

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('136.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.030483405483405484, 'negative_score': 0.9695165945165946, 'polarity_score': 0.030483405483405484, 'subjectivity_score': 0.4854617604617605, 'avg_sentence_length': 26.153846153846153, 'pct_complex_words': 0.675, 'fog_index': 10.731538461538463, 'avg_words_per_sentence': 26.153846153846153, 'complex_word_count': 459, 'word_count': 680, 'avg_syllables_per_word': 1.5397058823529413, 'personal_pronoun_count': 14, 'avg_word_length': 4.644117647058824}
```

In [244]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity

```

```

neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('137.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.0501419791401409, 'negative_score': 0.949858020859859, 'polarity_score': 0.0501419791401409, 'subjectivity_score': 0.3582919531448943, 'avg_sentence_length': 44.90909090909091, 'pct_complex_words': 0.6842105263157895, 'fog_index': 18.237320574162677, 'avg_words_per_sentence': 44.90909090909091, 'complex_word_count': 338, 'word_count': 494, 'avg_syllables_per_word': 1.4635627530364372, 'personal_pronoun_count': 12, 'avg_word_length': 4.516194331983805}

```

In [245...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

```

```

# Tokenize the text into words.
words = nltk.word_tokenize(text)

# Compute the positive and negative scores using TextBlob.
blob = TextBlob(text)
pos_score = blob.sentiment.polarity
neg_score = 1 - pos_score

# Compute the polarity and subjectivity scores using TextBlob.
polarity_score = blob.sentiment.polarity
subjectivity_score = blob.sentiment.subjectivity

# Compute the average sentence length.
avg_sentence_length = len(words) / len(sentences)

# Compute the percentage of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

# Compute the FOG index.
fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('138.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.05177083333333335, 'negative_score': 0.9482291666666667, 'polarity_score': 0.05177083333333335, 'subjectivity_score': 0.4113244047619048, 'avg_sentence_length': 31.375, 'pct_complex_words': 0.6912350597609562, 'fog_index': 12.826494023904383, 'avg_words_per_sentence': 31.375, 'complex_word_count': 347, 'word_count': 502, 'avg_syllables_per_word': 1.5258964143426295, 'personal_pronoun_count': 15, 'avg_word_length': 4.780876494023905}

```

In [246]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language

```

```

dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('139.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1452666322069307, 'negative_score': 0.8547333677930693, 'polarity_score': 0.1452666322069307, 'subjectivity_score': 0.41484676186168723, 'avg_sentence_length': 26.352941176470587, 'pct_complex_words': 0.7142857142857143, 'fog_index': 10.826890756302522, 'avg_words_per_sentence': 26.352941176470587, 'complex_word_count': 640, 'word_count': 896, 'avg_syllables_per_word': 1.6339285714285714, 'personal_pronoun_count': 17, 'avg_word_length': 5.004464285714286}

```

In [247...]

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('140.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)
```

```
{'positive_score': 0.0458405945905946, 'negative_score': 0.9541594054094054, 'polarity_score': 0.0458405945905946, 'subjectivity_score': 0.4418968531468533, 'avg_sentence_length': 30.86046511627907, 'pct_complex_words': 0.7415222305953278, 'fog_index': 12.64079493874976, 'avg_words_per_sentence': 30.86046511627907, 'complex_word_count': 984, 'word_count': 1327, 'avg_syllables_per_word': 1.4853051996985682, 'personal_pronoun_count': 10, 'avg_word_length': 4.706857573474002}
```

In [248]:

```
import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }
```

```

with open('141.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.04739717829340473, 'negative_score': 0.9526028217065953, 'polarity_score': 0.04739717829340473, 'subjectivity_score': 0.40733747384690755, 'avg_sentence_length': 36.857142857142854, 'pct_complex_words': 0.7209302325581395, 'fog_index': 15.031229235880398, 'avg_words_per_sentence': 36.857142857142854, 'complex_word_count': 930, 'word_count': 1290, 'avg_syllables_per_word': 1.4124031007751938, 'personal_pronoun_count': 12, 'avg_word_length': 4.535658914728682}

```

In [249]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
    }

```

```

        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

with open('142.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.11109423297009503, 'negative_score': 0.888905767029905, 'polarity_score': 0.11109423297009503, 'subjectivity_score': 0.4012419136419135, 'avg_sentence_length': 29.52, 'pct_complex_words': 0.7122854561878952, 'fog_index': 12.092914182475159, 'avg_words_per_sentence': 29.52, 'complex_word_count': 1577, 'word_count': 2214, 'avg_syllables_per_word': 1.5176151761517616, 'personal_pronoun_count': 17, 'avg_word_length': 4.7407407407405}

```

In [250]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'fog_index': fog_index,
        'pct_complex_words': pct_complex_words,
        'total_word_length': total_word_length,
        'avg_word_length': avg_word_length,
        'personal_pronoun_count': personal_pronoun_count
    }

```

```

'subjectivity_score': subjectivity_score,
'avg_sentence_length': avg_sentence_length,
'pct_complex_words': pct_complex_words,
'fog_index': fog_index,
'avg_words_per_sentence': avg_words_per_sentence,
'complex_word_count': complex_word_count,
'word_count': word_count,
'avg_syllables_per_word': avg_syllables_per_word,
'personal_pronoun_count': personal_pronoun_count,
'avg_word_length': avg_word_length
}

with open('143.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.14415652912488358, 'negative_score': 0.8558434708751164, 'polarity_score': 0.14415652912488358, 'subjectivity_score': 0.3939435037536303, 'avg_sentence_length': 23.513513513513512, 'pct_complex_words': 0.7425287356321839, 'fog_index': 9.70241689965828, 'avg_words_per_sentence': 23.513513513513512, 'complex_word_count': 646, 'word_count': 870, 'avg_syllables_per_word': 1.4620689655172414, 'personal_pronoun_count': 10, 'avg_word_length': 4.839080459770115}

```

In [251]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

```

```

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('144.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.14415652912488358, 'negative_score': 0.8558434708751164, 'polarity_score': 0.14415652912488358, 'subjectivity_score': 0.3939435037536303, 'avg_sentence_length': 23.513513513513512, 'pct_complex_words': 0.7425287356321839, 'fog_index': 9.70241689965828, 'avg_words_per_sentence': 23.513513513513512, 'complex_word_count': 646, 'word_count': 870, 'avg_syllables_per_word': 1.4620689655172414, 'personal_pronoun_count': 10, 'avg_word_length': 4.839080459770115}

```

In [257]...

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

```

```

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('145.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.1064740143369176, 'negative_score': 0.8935259856630824, 'polarity_score': 0.1064740143369176, 'subjectivity_score': 0.4510357996245091, 'avg_sentence_length': 32.18421052631579, 'pct_complex_words': 0.7391659852820932, 'fog_index': 13.169350604639153, 'avg_words_per_sentence': 32.18421052631579, 'complex_word_count': 904, 'word_count': 1223, 'avg_syllables_per_word': 1.4930498773507768, 'personal_pronoun_count': 23, 'avg_word_length': 4.902698282910875}

```

In [256]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

```

```

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('146.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.047626893063786264, 'negative_score': 0.9523731069362137, 'polarity_score': 0.047626893063786264, 'subjectivity_score': 0.39937607699743616, 'avg_sentence_length': 24.040816326530614, 'pct_complex_words': 0.7190152801358234, 'fog_index': 9.903932642666575, 'avg_words_per_sentence': 24.040816326530614, 'complex_word_count': 847, 'word_count': 1178, 'avg_syllables_per_word': 1.5483870967741935, 'personal_pronoun_count': 25, 'avg_word_length': 5.029711375212224}

```

In [255...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

```

```

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('147.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

{'positive_score': 0.08401560245310247, 'negative_score': 0.9159843975468975, 'polarity_score': 0.08401560245310247, 'subjectivity_score': 0.3879815341821921, 'avg_sentence_length': 30.936507936507937, 'pct_complex_words': 0.689584402257568, 'fog_index': 12.650436935506203, 'avg_words_per_sentence': 30.936507936507937, 'complex_word_count': 1344, 'word_count': 1949, 'avg_syllables_per_word': 1.5156490507952796, 'personal_pronoun_count': 19, 'avg_word_length': 4.719856336582863}

```

In [254]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0

```

```

for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('148.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```

{'positive_score': 0.048814877802973035, 'negative_score': 0.951185122197027, 'polarity_score': 0.048814877802973035, 'subjectivity_score': 0.41099220884935184, 'avg_sentence_length': 21.405797101449274, 'pct_complex_words': 0.6966824644549763, 'fog_index': 8.8409918263617, 'avg_words_per_sentence': 21.405797101449274, 'complex_word_count': 1029, 'word_count': 1477, 'avg_syllables_per_word': 1.5294515910629656, 'personal_pronoun_count': 17, 'avg_word_length': 4.761002031144211}

```

In [253...]

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

```

```

# Compute the average number of words per sentence.
avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

# Compute the count of complex words.
complex_word_count = 0
for word in nltk.word_tokenize(text):
    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1

# Compute the total word count.
word_count = len(nltk.word_tokenize(text))

# Compute the average syllable per word.
syllable_count = 0
for word in nltk.word_tokenize(text):
    syllable_count += len(dic.inserted(word).split('-'))
avg_syllables_per_word = syllable_count / word_count

# Compute the count of personal pronouns.
personal_pronoun_count = 0
for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
    if tag == 'PRP':
        personal_pronoun_count += 1

# Compute the average word length.
total_word_length = 0
for word in nltk.word_tokenize(text):
    total_word_length += len(word)
avg_word_length = total_word_length / word_count

# Return a dictionary of the computed variables.
return {
    'positive_score': pos_score,
    'negative_score': neg_score,
    'polarity_score': polarity_score,
    'subjectivity_score': subjectivity_score,
    'avg_sentence_length': avg_sentence_length,
    'pct_complex_words': pct_complex_words,
    'fog_index': fog_index,
    'avg_words_per_sentence': avg_words_per_sentence,
    'complex_word_count': complex_word_count,
    'word_count': word_count,
    'avg_syllables_per_word': avg_syllables_per_word,
    'personal_pronoun_count': personal_pronoun_count,
    'avg_word_length': avg_word_length
}

with open('149.txt', 'r', encoding=result['encoding']) as file:
    text = file.read()

variables = compute_text_variables(text)
print(variables)

```

```
{'positive_score': 0.1939009816474605, 'negative_score': 0.8060990183525395, 'polarity_score': 0.1939009816474605, 'subjectivity_score': 0.5267605633802817, 'avg_sentence_length': 33.58620689655172, 'pct_complex_words': 0.7412731006160165, 'fog_index': 13.730991998867097, 'avg_words_per_sentence': 33.58620689655172, 'complex_word_count': 722, 'word_count': 974, 'avg_syllables_per_word': 1.6591375770020533, 'personal_pronoun_count': 11, 'avg_word_length': 5.305954825462012}
```

In [252]:

```

import pyphen
from textblob import TextBlob
import nltk

# Create an instance of Pyphen for English language
dic = pyphen.Pyphen(lang='en')

def compute_text_variables(text):
    # Tokenize the text into sentences.
    sentences = nltk.sent_tokenize(text)

    # Tokenize the text into words.
    words = nltk.word_tokenize(text)

    # Compute the positive and negative scores using TextBlob.
    blob = TextBlob(text)
    pos_score = blob.sentiment.polarity
    neg_score = 1 - pos_score

    # Compute the polarity and subjectivity scores using TextBlob.
    polarity_score = blob.sentiment.polarity
    subjectivity_score = blob.sentiment.subjectivity

    # Compute the average sentence length.
    avg_sentence_length = len(words) / len(sentences)

    # Compute the percentage of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):

```

```

    if len(word) > 2 and len(set(word)) > 2:
        complex_word_count += 1
    pct_complex_words = complex_word_count / len(nltk.word_tokenize(text))

    # Compute the FOG index.
    fog_index = 0.4 * (avg_sentence_length + pct_complex_words)

    # Compute the average number of words per sentence.
    avg_words_per_sentence = len(nltk.word_tokenize(text)) / len(sentences)

    # Compute the count of complex words.
    complex_word_count = 0
    for word in nltk.word_tokenize(text):
        if len(word) > 2 and len(set(word)) > 2:
            complex_word_count += 1

    # Compute the total word count.
    word_count = len(nltk.word_tokenize(text))

    # Compute the average syllable per word.
    syllable_count = 0
    for word in nltk.word_tokenize(text):
        syllable_count += len(dic.inserted(word).split('-'))
    avg_syllables_per_word = syllable_count / word_count

    # Compute the count of personal pronouns.
    personal_pronoun_count = 0
    for word, tag in nltk.pos_tag(nltk.word_tokenize(text)):
        if tag == 'PRP':
            personal_pronoun_count += 1

    # Compute the average word length.
    total_word_length = 0
    for word in nltk.word_tokenize(text):
        total_word_length += len(word)
    avg_word_length = total_word_length / word_count

    # Return a dictionary of the computed variables.
    return {
        'positive_score': pos_score,
        'negative_score': neg_score,
        'polarity_score': polarity_score,
        'subjectivity_score': subjectivity_score,
        'avg_sentence_length': avg_sentence_length,
        'pct_complex_words': pct_complex_words,
        'fog_index': fog_index,
        'avg_words_per_sentence': avg_words_per_sentence,
        'complex_word_count': complex_word_count,
        'word_count': word_count,
        'avg_syllables_per_word': avg_syllables_per_word,
        'personal_pronoun_count': personal_pronoun_count,
        'avg_word_length': avg_word_length
    }

    with open('150.txt', 'r', encoding=result['encoding']) as file:
        text = file.read()

    variables = compute_text_variables(text)
    print(variables)

```

```
{"positive_score": 0.12257492962410996, "negative_score": 0.87742507037589, "polarity_score": 0.1225749296241096, "subjectivity_score": 0.4560325739833937, "avg_sentence_length": 20.149253731343283, "pct_complex_words": 0.7125925925925926, "fog_index": 8.34473852957435, "avg_words_per_sentence": 20.149253731343283, "complex_word_count": 962, "word_count": 1350, "avg_syllables_per_word": 1.5081481481482, "personal_pronoun_count": 24, "avg_word_length": 4.78962962962963}
```