Leaping into Future
Or
Sabotaging the System

Abstract

This paper analyses four articles on Google published by Nicholas Carr and discusses them with the help of other perspectives and statistics. The list of items is "The Google Enigma", "The Omnigoogle", "Moral Code" and "Is Google Making Us Stupid". The study focusses on the history of the Internet, compares to our preferences over the period, examines the impacts of Internet on our lives and questions whether it is technology or us, who need to change.

1. Introduction

We cannot think one day without data packs on the phone because it has made our lives so easier. Today, we don't have to run to shops to purchase Maps and locate the place, Google Maps will locate the place, calculate the traffic and find the shortest route with minimum congestion to drive you to your destination. It all started with the Internet, a medium which connects the world making it possible for the people to talk to each other wirelessly. The invention of Internet did not happen overnight; it took many years of hard work and failed projects to build a network so colossal. Internet was present in the form of ARPANET (Advanced Research Projects Agency Network) established in 1969 and NSFNET (National Science Foundation Network) established in 1985, but it is after Tim Berners-Lee's invention of World Wide Web(WWW) in 1989, the course of Internet took a new turn, and with the help of personal computers and network providers, it became accessible to common people. Later evolved into the machine which can assist humans to work in industries, to vacuum their floors, to drive their vehicle and locate the place, and to help with critical surgeries. Today, we have unlimited access to information, a platform where we can reach out to the world, a source of entertainment and endless opportunities to work online. But it is also a breeding ground for illegal activities, a culprit of many illnesses and a reason for Internet addiction. So, have we created a virtual world of endless opportunities or crime scene or severe maladies? Our next leap into Artificial Intelligence would be disaster or blessing?

Let us look at some of the questions that technology has raised and whether it is the failure to understand has awakened the fearful mind which hinders the progress or there is a serious disaster waiting to happen.

2. Behavioural Issues

A few Google searches and some quick clicks on hyperlinks is a story of everybody's life who is working online. We don't even realise when we are scanning through the blog posts, writing emails or tripping from link to link and not working on the task anymore (Carr, 2008). Internet was an honest attempt to help solve problems which consumed time but in terms of business, time is money. But businesses do not think charity, the whole point is to generate more revenues because money is what enables an entrepreneur. It is businessman's curse to find an opportunity to create a business. There when Google saw an opportunity to generate revenue through AdSense. Try to complete your work or read newspaper on a free website and Google

Ad is blinking on the left or top of your page and we'll end up clicking the ad because of our shopping addiction.

Over the period, it is our dependency on the Internet is conceptualised as behaviour addiction. The Internet addiction is broadly classified into five subtypes such as Cyber-relationship addiction, Cyber-sexual addiction, Net compulsions, Information overload, and Computer addiction which can also result in neglect of social and work life, relationship breakdowns, loss of control, etc. This over compulsive behaviour has taken a toll on workplace wherein employees engage in non-work related internet use. This can be attributed to employees' bad habits and unethical decision making capabilities which can be consequence of affordability, anonymity, convenience, and longer working hours at offices (Griffiths, 2010). This is the reason why companies started blocking some site to get productive hours out of their workforce.

"According to study in 2011, almost third of UK companies blocked social networking sites to focus on work in business hours. At Royal Dutch Shell, employees weren't blocked but were greeted with a pop up to stay focussed during working hours. The German car manufacturer, Porsche, banned employees from using social media sites because it feared industrial spying. But most of the companies were concerned about data loss which is an error condition in information systems in which information is destroyed by failures or neglect in storage, transmission, or processing. Although 18 per cent of employees felt demotivated if companies introduced stricter policies, 19 per cent commented that they did not fell to work in this environment and 4 per cent considered leaving. But 31 per cent of UK companies showed interest to invest in this area over the next year" (Palmer, 2011). Also, many would agree that our lives on social networking sites is more important than people who are present at the dinner. Our professional lives are controlled but what about the personal lives.

Over compulsive behaviour on the Internet is also related to depression, anxiety, loneliness and stress apart from dry eye syndrome, carpal tunnel syndrome, lower back pain. At one point in time, people agreed that the Internet Surfing is a hobby and people who stay online is the one who'll learn most. Today, many of us are aware that how the Internet addiction can ruin our life, but many of us also agree that prolong working hours on computer, wrong postures and addiction attributes to many other illnesses. We can cannot stop ourselves from clicking from hopping from site to site until we add site blockers to fight our urge to check last likes on our uploaded digital material. A study conducted on 1041 students in China showed no results of depression and anxiety at the start of the study but nine months later, students were evaluated again and 87 were categorised under depression. Researchers' study indicated that students who use the Internet pathologically are 2.5 times more prone to depression than students who aren't addicted to the Internet (Hendrick, 2010). The Internet addiction is not only related to wasting time on the Internet, but also it has serious impacts on your health which is more deplorable. Since we don't want next generation to grow up developing serious spine problems or mental disorder. Addiction to smoking, drinking and gambling is still controllable compare to universal accessible Internet just your finger touch.

3. Reading Impacts

A voracious reader, Scott Karp, who was a lit major in college comments that his reading habit has changed because of the convenience. A pathologist and a faculty of University of Michigan Medical School, Bruce Friedman, who also stated that "he has lost his ability to read War and Peace and it is harder to absorb blog of more than three to four paragraphs" (Carr, 2008). Many people agree to the fact that reading on the Internet is incomparable to read a book. Recent studies have found that qualitative reading on the Internet requires complex skills and advanced strategies to read successfully. Traditional methods of reading are not sufficient to comprehend on the Internet. Text comprehension is dependent on reader's abilities to draw a connection between texts and their prior knowledge and to regulate their strategies for specific reading purpose. A paradigm shift in online reading informs that the nature of literacy and learning is rapidly changing as new technologies emerge. Reading online requires new comprehension skills and strategies above than the reading printed books (Coiro, 2011).

"As there's a tendency to glorify technological progress, there's a countertendency to expect the worst of every new tool or machine" (Carr, 2008). Scarcity and Abundance are both opposite sides of the same coin, and these two extremes can co-exist when there is a balance of the two entities. Technology is helping us evolve, taking us to the planets, helping us understand antimatter, solving complex equations but same technology poses a threat. As per Carr, his sceptical view of reading on the Internet is only superficial because we do not consume knowledge in undistracted environment. In comparison to the book reading in quiet spaces, reading online hinders making own associations, drawing own inferences and analogies and developing own ideas. Today, we have ad-blockers, site-blockers, e-readers and airplane mode to work in a silent zone but there is a fine line between leisure and overindulgence.

E-readers debuted into the market with a hope that they'll provide silent ad-free zone to read books. In fact, Amazon launched their readers with the function to search the word by a simple touch. But due to the cognitive effort on the brain, people found it complex to comprehend texts preferring hardcopies instead of e-readers (Dooley, 2015). In another article, it is commented that both users and technology are not ready to take a leap to e-readers or to read online. Users found it difficult to read the text online because of headaches, blurry visions leading to fatigued, strained dry eyes. Also, people are diagnosed with iPad Necks and Computer Vision Syndromes. In a study undertaken in 2013 with tenth-graders in Norway, students were divided into two groups. One group was given texts in print and others given texts as PDFs on computer screen. Students who read on paper scored better than the students read the texts digitally. "Graduate students and faculty in science and engineering at the University of Kansas were asked about their e-book usage and preferences. Almost 40% preferred e-books but among those of the respondents who primarily read on e-readers/tablets, 52% preferred reading on screens. Discomfort or difficulty in reading on a screen was the main reason for their dislike. In another example, student preferred all his notes and his books on iPad but as most students are not

there yet suggests that there will be mixed behaviour in future. Also, the e-book is easily available and downloaded at one click which suggests that one day students might prefer e-books" (Caroline & Wiberg, 2015). The people prefer different hobbies that suit their personalities, and nobody can force someone to chase all hobbies if they don't want to. After all, it comes down to preferences that is what happening in the Internet world.

4. Giving solutions or creating more problems

The faster we surf across the Web, we click more links and view more pages, which gives Google to collect information about us and feed us with more advertisements. (Carr, 2008). Google is constantly collecting information of the people on Internet and tailor ads as per their interests. Data Mining is the interesting field in Computer Science which collects raw data, analyses it and turns it into useful data. It is interesting that no matter which site we visit, same ads follow us. Data mining is often linked with Artificial Intelligence, but data mining deals with collecting raw data and turning into meaningful information while Artificial Intelligence requires human intelligence, speech recognition and decision-making abilities. In the article, Carr also quotes words of former CEO of Google, Eric Schmidt that they want to solve problems that have never been solved before and artificial intelligence is the hardest problem out there.

The founders of Google, Brin & Page always believed that the search engine technology has had to scale to keep up the growth of the web. In November 1997, the top search engines claimed to index from 2 million to 100 million web documents. In March and April 1994, the World Wide Web used to receive 1500 queries per day. In November 1997, AltaVista claimed it handled 20 million per day. Analysing the data, Brin & Page estimated that with the increasing number of users on the web, by the year 2000, search engines have to handle hundreds of millions of queries (Brin & Page, 2012). As per Brin & Page, Google is designed to be a scalable search engine to provide high quality search results over a rapidly growing World Wide Web. Recently, Google's DeepMind division, which works on Artificial Intelligence, took a big leap in producing computer-generated speech. DeepMind confirmed that they can generate not only human voice but also short piano compositions from the system (Waters, 2016).

"Google may not be a perfect model, but it deserves close attention and study" (Carr, 2007). As per Carr, the economics of Google is simply too different and if somebody follows its lead, they might get broke. Google first created search engine drawing the attention of web surfers towards them. When they became the dominant search engine, the development of an auction to sell ads was linked to search results. Their third great innovation was to design it parallel-processing computer system which incorporates thousands of computers in data centres around the world and processes searches and transactions at unprecedented speeds (Carr, 2007). In another article, Carr quotes that Google introduces half-finished products and services as online "betas" version to gather some return instead of none because failed launch of new products is costly (Carr, 2008).

Google has a history of launching products/projects into the market and if they don't do well on the market, they shut them. Google Glass, Google Answers, Google Fast Flip, Google Wave, Dodgeball, Jaiku and Google Buzz are some of the examples (Telegraph, 2016). Google Glass, the head-mounted glasses that can shoot video, take pictures, and broadcast what you see to the world, was one of the most anticipated wearable technology in 2014 but many people denied purchasing them because of privacy concerns since it constantly films what it sees. It started a huge about debate of new boundaries for privacy concerns and how will we behave with each in social situations. Some argued that we are used to getting filmed since CCTVs are part of our life but others were uncomfortable with the new technology (Arthur, 2013). Google Glass gathered lots of attention, but Google shocked the world when it sold recently acquired Motorola Mobility division to China's Lenovo stating that they want to focus on Android mobile operating system software (Guglielmo, 2014). Selling Motorola to Lenovo was a win-win situation for both companies as Google kept the patents for further development and Lenovo got the entry ticket into other unexplored western markets of US and UK (Su, 2014). Failures are the stepping stones to success and Google make sure that they learn from their failed projects and Motorola was one of them. The company invests in big projects and recruit independent thinkers because they believe that "if you hire the right people and have big enough dreams, you'll usually get there. And even if you fail, you'll probably learn something important" (Schmidt, 2014). Economics is studied on a group level, not individual level; business often seeks results on the population in a specific market zone, and if they pass required percentage, the product stays on the market otherwise production is stopped.

5. Industrial Revolution vs. Technology Revolution

History of mankind is not limited to Google launching new products into markets. It took 150 years to U.S. to bring Industrial Revolution and it started with Vanderbilt, Rockefeller, Morgan, Carnegie and Ford (The Men Who Built America, 2012). They revolutionised the railway, oil, finance, steel and automobile industries respectively. It all started after the civil war which led to the transition in the way the railway, oil and iron industries works. Challenges and opportunities created new roads for these entrepreneurs and today what see as America is a foundation of these resolute entrepreneurs who wanted to create. Also, great depression left a mark on U.S. history which also serves as a case study in finance world. The two world wars created a new path for emerging technologies after World War II. U.S. created an agency named DARPA (Defense Advanced Research Projects Agency) to use emerging technologies for military use which later collaborated to create the Internet (Wikipedia, 2016). Today, most of the major STEM innovations happen in the United States of America because every year the government make sure that the birthplace of all technologies should keep investing in the future of technology (National Economic Council and Office of Science and Technology Policy, 2015). U.S. wants to invest in the future of technology since they created many technologies we use now.

Industrial Revolution changed the way we manufacturing processes and what we see today is the outcome of the paradigm shift. We summarise history in words on paper, easier enough for us to comprehend. But, if we note the date in chronological order,

every major change took more than 200 years surpassing average human age. We can anticipate the future, but if we see one, we are lucky to survive. General Electric, a multinational conglomerate was once known by the name of renowned scientist Thomas Alva Edison. Back in 1889, Thomas use to carry out various inventions in his various companies, and J.P. Morgan saw his talents, he invested in his inventions and in fact, J. P. Morgan was the one who's house was lit up first with D.C. current for demonstration. Thomas was declared lunatic when he fried the man in electric execution chair and people called it heinous to give someone this death, but he continued with his experiment (The Men Who Built America, 2012). Many of his experiments are commercialized, ideas are implemented and products are still used today. Now, after World War II, major technological innovations happened in the US since they continued experimenting emerging technologies first for defense projects then for day to day purpose. It was not a leap; this process of technology shift took more than 50 years to reach the common man. Today, we are left to debate on the topics "Technology: boon or bane" or "Artificial Intelligence: future of mankind".

Google is one the key players in the technology sector apart from Amazon, Oracle, IBM and Apple. The majority of Google's revenue is generated from AdSense but has been invested in various projects such as Project Loon which aims to provide the internet access to rural areas and parts of the world where it is difficult to access the web. Project Titan which will run on solar panels to provide the Internet coverage to 4 billion people on earth. Google X to detect the cancer by counting particles continuously. Google driverless cars aim to reduce deaths by car collisions. Smart Contactless Lens to get health information. Google spoon to help those with Parkinson's disease (Muoio, 2016). In Moral code (Carr, 2012), the author introduced Google self-driving car as Artificial Intelligence killing disaster, if launched into the market. Recently, this project of Google named its car as "Waymo" and Google's parent company Alphabet thinks that it is ready to be commercialized (KITMAN, 2016). Google has repeatedly emphasized that self-driven cars will help in reduction of car accidents. As per Kitman, it is still unsure how many lives could be saved by driverless cars, because data on the role of human error in crashes is incomplete and misleading, relying heavily on self-reporting. Kitman further emphasizes on the pros and cons of bringing the driverless cars into the market. On one side, jobs will be created, but on the other side cars can be easily hacked, our infrastructure is not ready for the self-driven cars. Also, raised a question if we are driverless car ready yet?

6. Messiah or Satan

"Google's protean appearance is not a reflection of its core business" (Carr, 2008)
As per Carr, most of Google's revenue is generated from Google AdSense and it is a superset of the many small products/projects which complements each other. Further, he comments that Google generates business by collecting data of consumers and tailoring ads as per their needs. This demand is generated exponentially as more and more products and services are delivered digitally over computer networks, which in turn creates more business for Google.

"22-year worker dies in Volkswagen car factory when he was trapped by the robotic arm and crushed against metal plate" (Huggler, 2015). This news in 2015 was a wakeup call for many people in the world and this also lead to a question "Are we safe with robots around us?". In another incident in 2016, Tesla car during autopilot mode runs into the car crash. According to the carmaker, as automation didn't notice the white side of the tractor as it turned in front of the car against a brightly lit sky so the brake wasn't applied (Levin & Plungis, 2016). In 2015, Google had been awarded a patent for a system that would allow mass production of robotic devices (Curtis, 2015). Many have raised questions about bringing the artificial intelligence into mass production since we visualise robots when we think about AI and our experiences have not been satisfactory enough to let that happen shortly. But robotic surgery has been successful since it is believed that "it improves the accuracy of surgical procedures, reduces trauma and shortens recovery times" (Curtis, 2015). Our mind is by default configured to assume the gaps and complete our theory. When Google was awarded patents for mass production of robots, we think of humanoids instead of surgical machines. Humans are programmed to act against fear because by nature we want to survive. Anything that deals with the unknown is a threat and AI is biggest of them.

Over the last twenty years, Google Inc. evolved from search engine to a subset of the parent company "Alphabet Inc.". Currently, Alphabet Inc. is focussed on technology, life sciences, investment capital and research while Google Inc. is left to focus on services such as online advertising technologies, cloud computing, software and hardware. Google never cared whether they're framed as God or Devil as Sergey Brin one quoted "Some say Google is God, others say Google is Satan", they just did what is right to progress. Besides, Google is not the only company that keeps track of information you give on the Internet, Facebook, Amazon, Microsoft all track information. Due to compromising sensitive information over the Internet, the Chinese government has banned 1.3 million websites in 2010 including Google, YouTube, Flickr, Facebook, Instagram and Twitter (Carson, 2015). On the contrary, Google offered a version of its services that conformed to the Chinese government's censorship policy, but due to the cyberattack from within the country, the company effectively shut down it search engine and a reverse course (Waddell, 2016). Waddell further says that "Google's move to pull the plug-in China is an extreme example of the kinds of decision take to operate abroad: If they want to do business, they have to abide by laws". Businesses do not run on charity, even companies like Wikipedia require money to run businesses. Also, business exists because they provide the solution in the form of product or services and money is the only way they enable themselves to produce more. Businesses are often categorised as devil's workshop but if they did not exist, we would have been living in the prehistoric era. What Google does as a company is what every company in the market would do to sustain its position.

7. Conclusion

Utopia is not creepy; however, the way humans perceive things is the interesting read because utopia cannot be achieved until we all think alike. The interesting mix of the thoughts and acceptance of the perspectives in a group keep the debates alive.

Also, it is our different characteristics that fits well into the puzzle of economies that makes us important for certain job. The father of modern economics, Adam Smith, once said that "If every man in the economy is left to pursue his own interest in own way, he'll be helping the society indirectly" (Smith, 1776). It'll be good to have the citizen to be part of the system rather than not taking part at all. The Internet has broken all the walls, and our new system is formed in the cloud. Perspectives of the writers such as Nicholas Carr is equally important to the Internet age because their scepticism raises a question on technology which can be addressed before launching a product/ technology into the market. If we see this at a superficial level, our mind which is rewired as per technological era will reject the ideas questioned but when these arguments are quantified with the help of various studies demands to look deeper and take a step towards future together.

Bibliography

Arthur, C., 2013. *Google Glass: is it a threat to our privacy?.* [Online]
Available at: https://www.theguardian.com/technology/2013/mar/06/google-glass-threat-to-our-privacy
[Accessed 5 January 2017].

Brin, S. & Page, L., 2012. Reprint of: The anatomy of a large-scale hypertextual web search engine. *Computer Networkd,* 23 October, 56(18), pp. 3825-3833.

Caroline, M. & Wiberg, N., 2015. *Screen vs. paper: what is the difference for reading and learning?.* [Online]
Available at: http://insights.uksg.org/articles/10.1629/uksg.236/
[Accessed 4 January 2017].

Carr, N., 2007. *The Google Enigma.* [Online]
Available at: http://www.strategy-business.com/
[Accessed 4 January 2017].

Carr, N., 2008. *Is Google Making Us Stupid?.* [Online]
Available at: http://www.theatlantic.com/magazine/archive/2008/07/is-google-making-us-stupid/306868/
[Accessed 4 January 2017].

Carr, N., 2008. *The Omnigoogle.* [Online]
Available at: www.roughtype.com
[Accessed 5 January 2017].

Carr, N., 2012. *Moral code.* [Online]
Available at: http://www.roughtype.com/?p=2173&cpage=2
[Accessed 4 January 2017].

Carson, B., 2015. *9 incredibly popular websites that are still blocked in China.* [Online]
Available at: http://uk.businessinsider.com/websites-blocked-in-china-2015-7
[Accessed 5 January 2017].

Coiro, J., 2011. Predicting Reading Comprehension on the Internet. *SAGE journals,* 12 October.

Curtis, S., 2015. *Is Google building a robot army?.* [Online]
Available at: http://www.telegraph.co.uk/technology/google/11537596/Is-Google-building-a-robot-army.html
[Accessed 5 January 2017].

Dooley, R., 2015. *Paper Beats Digital In Many Ways, According To Neuroscience.* [Online]
Available at: http://www.forbes.com/sites/rogerdooley/2015/09/16/paper-vs-digital/#2149bd881aa2
[Accessed 4 January 2017].

Griffiths, M. D., 2010. Internet abuse and internet addiction in the workplace. *ResearchGate,* September.

Guglielmo, C., 2014. *Google, Saying It Wants To Focus on Android, Smart Devices, Sells Motorola To Lenovo For $2.91 Billion.* [Online]
Available at: http://www.forbes.com/sites/connieguglielmo/2014/01/29/google-sells-motorola-mobility-to-lenovo-for-2-91-billion/#2a43fab626e6
[Accessed 5 January 2017].

Hendrick, B., 2010. *Internet Overuse May Cause Depression.* [Online]
Available at: http://www.webmd.com/depression/news/20100802/internet-overuse-may-cause-depression
[Accessed 6 January 2017].

Huggler, J., 2015. *Robot kills man at Volkswagen plant in Germany.* [Online]
Available at: http://www.telegraph.co.uk/news/worldnews/europe/germany/11712513/Robot-kills-

man-at-Volkswagen-plant-in-Germany.html
[Accessed 5 January 2017].

KITMAN, J. L., 2016. *Google Wants Driverless Cars, but Do We?.* [Online]
Available at: http://www.nytimes.com/2016/12/19/opinion/google-wants-driverless-cars-but-do-we.html?_r=0
[Accessed 4 January 2017].

Levin, A. & Plungis, J., 2016. *Driver in Fatal Tesla Crash Using Autopilot Was Speeding.* [Online]
Available at: https://www.bloomberg.com/news/articles/2016-07-26/florida-driver-in-fatal-tesla-crash-using-autopilot-was-speeding
[Accessed 5 January 2017].

Muoio, D., 2016. *11 Google projects that could change the world.* [Online]
Available at: http://uk.businessinsider.com/google-projects-that-could-change-world-2016-7?r=US&IR=T/#and-then-theres-googles-mission-to-cure-death-10
[Accessed 4 January 2017].

National Economic Council and Office of Science and Technology Policy, 2015. *A Strategy For American Innovation ,* Washington: The White House (Washington).

Palmer, M., 2011. *Third of companies block social media.* [Online]
Available at: https://www.ft.com/content/4edb8512-d7de-11e0-a5d9-00144feabdc0
[Accessed 5 January 2017].

Parker, G. M., 2008. *Team Players and Teamwork: New Strategies for Developing Successful Collaboration.* s.l.:John Wiley & Sons.

Schmidt, E., 2014. *How Google Works.* s.l.:John Murray.

Smith, A., 1776. *The Wealth Of Nations.* London: W. Strahan and T. Cadell.

Su, J. B., 2014. *Google Profits Billions With Motorola Sale To Lenovo, Keeps Patents.* [Online]
Available at: http://www.forbes.com/sites/jeanbaptiste/2014/01/29/google-profits-billions-with-motorola-sale-to-lenovo-keeps-patents/#6de506efc25f
[Accessed 5 January 2017].

Telegraph, 2016. *Google's biggest failures: in pictures.* [Online]
Available at: http://www.telegraph.co.uk/technology/2015/12/15/18-of-googles-biggest-failures-in-pictures/google-buzz/
[Accessed 5 January 2017].

Tesla Memorial Society of New York, n.d. *Tesla Memorial Society of New York.* [Online]
Available at: http://www.teslasociety.com/tesla_tower.htm
[Accessed 4 January 2016].

The Men Who Built America. 2012. [Film] Directed by Patrick Reams, Ruán Magan. USA: Stephen David Entertainment.

Waddell, K., 2016. *Why Google Quit China—and Why It's Heading Back.* [Online]
Available at: http://www.theatlantic.com/technology/archive/2016/01/why-google-quit-china-and-why-its-heading-back/424482/
[Accessed 5 January 2017].

Waters, R., 2016. *Google's DeepMind makes progress in computer-generated speech.* [Online]
Available at: https://www.ft.com/content/f4cbfb5c-7629-11e6-bf48-b372cdb1043a
[Accessed 5 January 2017].

Wikipedia, 2016. *DARPA.* [Online]
Available at: https://en.wikipedia.org/wiki/DARPA
[Accessed 4 January 2016].