TECHNOLOGY IN LANGUAGE, COGNITION, AND CULTURE

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Abstract: *In this paper, the main focus is on technological inventions, advancements and their impact on language, cognition, and culture. Through the age, how the languages are developed and the factors for the propagation of knowledge and language are discussed. By taking video games and social media as an example, how technology is having an impact on human cognition is discussed. At the end, we discuss how music, movies, education etc. are changed with the advancement of technology.*

Language is consistently changing, advancing all the time. Technology plays role in language learning all around the world. We learn language from basic alphabets and then move on to complex novels and poems. With the help of digital advancements in learning, students can learn a language either with the help of a teacher or on their own. We know that first, we could start with simple "words" and combine words to form a sentence with a syntax. That is how we learn a language. If I were to learn a new language, I would find a word in my language and then use an online translator to convert into a new language. By relating the words with native language and using the internet I am likely to learn it. In this way, technology helps in acquiring a new language. In the old internet less era, people would learn it by social interaction or books (search in the dictionary for the meaning of it) but now it is easier and faster with the internet.

With exponential increase of social media usage, many of us are familiar with acronyms such as TTYL, OMG, LOL etc. These acronyms came into existence because people are not interested to type the entire sentence due to any reason such as lack of time, laziness etc. Rather than typing complete sentences, we started using such acronyms. If social media did not exist, we might have not used such acronyms. If used also there would not be same as meaning as we are using now. Another example is auto correction, it has made our life easier but with its regular usage we are losing the spelling ability

If we consider the invention of the printing press, I think the printing press has helped a lot in language learning and improving language ability. Before the printing press wasn't there, monks copied books and this process took many years to get it published. But the invention of the printing press made it easier. Now more books can be printed easily and it can help many people to learn a new language or improve their language. Writing changed both speech and writing. The more people wrote and read, the more their speech changed. Considering telephone as another example of technology, how it influenced language? The English word "Hello" is one of the changes. At the point when Alexander Graham Bell made the first phone call, he didn't use the word "hello". There was no typical method to address each other on the telephone. It was quite a while before English speakers built up a set method for picking up the phone. Presently, pretty much every English speaker picks up the telephone by saying "Hello". But before the telephone, individuals did not say "HELLO" to welcome one another. Rather, when they see somebody, they would greet: "Great morning, great day, or goodbye." At the point where the telephone was invented, "hello " was another word to the English language. The Oxford English Dictionary says that "hello " turned

into a typical piece of English language in 1827. And instead of being used as a greeting, "hello" had a very different meaning. "Hello" was originally used to express surprise. But After "hello" turned into the set method for picking up the telephone, it started to become a part of normal conversation. Presently, when individuals see one another, they started saying "hello" rather than "Great morning or a great day."

Now let us look at some words, drone, cloud, spam, and the symbol '#'. What comes to your mind when you came across these words? We get the modern technical meaning, but actually, technology influenced us to re-imagine and change the meaning of the words such as drone, cloud, spam, '#'. Let us see each of those words, their old and their new usages. And also, how technology influenced the above words. The first-word drone, its old usage is done when a person makes a continuous low humming sound or an irritating noise. But now it describes a small, pilotless aircraft. We all know what the cloud is, a visible mass of condensed water vapor floating in the atmosphere. But the now modern usage is the place where data is stored and backed up remotely and made available to its user over a network. Now similarly the word spam old usage is strange tinned meat product but now it is just unwanted messages or emails. The symbol '#' is a number sign or hash key but now the '#' is used as a hashtag get on social media sites.

To give a little hint on how technology affects the cognition of a human mind, let us take video games for example and study its effect(s) on human cognition. It's been decades since the invention of video games took place. From 8-bit games like Mario, Duck Hunt, Street Fighter etc. to modern AAA titles such as Assassin's Creed, Call of Duty, Battlefield etc. video games have come a long way. In the year 2017, the gaming industry alone has made more money than music, movie, and arts combined. According to statistics about 90% of school-aged individuals are gamers and the average age of a gamer is 33 years old, this comes as a surprise as video games are treated as a thing which is related to children in modern day society. Recently, gaming culture has been blooming in India with the advent of the game PUBG. Coming to our primary focus on how these video games affect a person's cognition. Modern day games are heavily action-packed and it requires quick decision-making skills. Gamers have a good eye to smaller details and they can keep track of multiple things or enemies at the same time. An interesting game is included in the presentation where participants are asked to keep track of a blue ball which turns to yellow after a while amongst other few randomly moving yellow balls. Participants find it difficult to keep track when the number of blue balls is increased. A non-gamer is able to keep track of 3-4 balls but whereas a gamer is able to 6-7 balls at once. This clearly shows the effect of gaming on cognition. Now lets us look inside the working of a brain of a gamer. While playing, a gamers parietal lobe is lit up in MRI scans which deal with the orientation of attention. And also, frontal lobe and anterior cingulate area also lit up which deals with sustaining of attention and conflict resolution respectively. Another experiment has been conducted where subjects were asked to say the color of the text aloud. At first, commonly used words such as chair, horse, cat etc. were taken and each of the words had a color, the subjects were able to tell the color of the text without any sweat but when the words such as red, blue, yellow etc. are taken in different font color subjects found it difficult to utter the color, this shows that our brain has associated the word 'blue' with color blue, when the color of it is changed human brain finds it little difficult to understand it. In the case of gamers who have developed conflict resolution skills, are able to utter the color of the word more comfortably compared to that of a non-gamer. These are the few examples of the influence of video games on a human brain and its cognition. We have specifically studied the effect of video games on human

cognition. But on the bigger picture, other areas of technology have also a significant impact on how a human think and its approach to solving a problem.

Video games definitely improve cognitive skills. People with dyslexia are able to read the words or sentences a little faster. Recently schools adopted video games as one of the aids of teaching. Few games are ready to take an extra step to make the games as real as possible to the real-world scenarios. Games such as Assassin's Creed, Arma, and many simulators give a real-life understanding of the risky situation. Soldiers, pilots, and surgeons' study and get involved with this kind of games before entering into their risky jobs. Consumption of video games can be compared with wine. With proper dosage and use these things can help the human body both physically and mentally.

Now let us look at the other example which is social media one of the modern wonders. It brought people together and erased boundaries between countries and cultures. Social media has a significant role in shaping our cognition. According to a study, 5-10% of the world's population is addicted to social media. The brain reward gives dopamine rush to the brain while using social media with very little effort. With regular usage, our body gets accustomed to those dopamine levels and wants more, thus creating an addiction. Even though it is a psychological addiction, its effects are similar and harmful to that of substance addiction. We might think that people who juggle between various websites and social media networks are good at multi-tasking but that is false according to a study. According to another study, 30-40% of social interactions in real life include self-experiences, whereas in another case 80% is about the self-involvement

Culture can be characterized as "an arrangement of shared thoughts, values, traditions, customs, images, practices and artifacts that belong to a certain society." Culture consists of, music, garments, and occasions that a gathering of individuals shares. So, culture can be outlined as the method for living.

Technology also plays its role in impacting a culture. On the internet and social media, we are exposed to different cultures, thus the culture of other community can influence our culture. When planning on a vacation, we often look up on the internet leading to the discovery of new places, community and culture. With the advent of modern communication technologies, we travel to new places and end up having slight or completely new cultural experiences. Let us take the example of electric guitar, with its invention whole new genre of music is created namely 'rock'. And also, the movies, one of the best platforms to showcase one's culture. Coming to present internet age, it gave rise to thousands of new cultures. Nowadays online shopping is growing at a rapid rate, as it is way easier and more convenient than to buy at a local store. Even in education, with the invention of new languages such as Java, C, python etc. human is able to impart partial or pseudo cognition to a machine in the form of machine learning or artificial intelligence.

From the stone age to modern quantum age, the technology played an important role in shaping our language, cognition or culture. The changes might now be sudden but with time it took many shapes and forms in the cast of technology. And this won't be the final form either, the path of technology influencing other areas of science and arts is never-ending.

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