

A Journey of English Language from the Era of Printing Press to the Present Age of Artificial Intelligence

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ABSTRACT

Modern 'Global Village' needs a 'Global Language' as a single lingua franca for globalized trade and business requirements. More than 350 million people around the world speak English as a first language and about 430 million, as a second language. Thus, English is considered as a global language. In this research paper, the alterations in English language due to technological advancement especially in information and communication technology starting from printing press to high speed internet age has been chronologically discussed and reviewed. The invention of printing press led to greater availability of books and news paper. Radio contributed to the spread of English language during wartime and invention of Television was a major factor in the increased use of English as a second language in the 1950's. Internet and social media has brought significant changes in usage of English language. With the invention of AI work of translation and interpretation can be done easily.

Keywords: Globalization, Lingua-franca, Information and Communication-Technology, Artificial-Intelligence

I. INTRODUCTION

English language is changing, with passing of time, like any other human language. Language is always changing, evolving and adapting to the needs of its users. As long as the needs of language users continue to change, so will the language. The change is so slow that from year to year we hardly notice it. But reading Shakespeare's writing from the sixteenth century can be difficult. If we go back a couple more centuries, Chaucer's Canterbury tales are very tough sledding and if we go back another 500 years and try to read Beowulf, it would be like reading a different language. English language change is a variation over time in phonological, morphological, semantic, syntactic and other features.

Language changes for several reasons. It changes because the needs of its speaker's change viz. advent of new technologies, arrival of new products, and new experience require new words to refer to them clearly and efficiently. Impact of technology in our lives is astonishing. Its effect on the way we communicate has changed forever. In this research paper the alterations in English language due to technological advancement especially in information and communication starting from printing press to high speed internet age has been chronologically discussed and reviewed. The invention of printing press led to greater availability of books and news paper. Radio contributed to the spread of English language during wartime and invention of Television was a major factor in the increased use of English as a second language in the 1950's. Internet and social media has

brought significant changes in usage of English language.

II. ALTERATION IN ENGLISH LANGUAGE DUE TO INVENTION OF PRINTING PRESS

Johannes Gutenberg was a German blacksmith, printer and publisher who introduced printing to Europe with invention of printing press¹. Then, started the printing revolution and is regarded as a milestone of the second millennium. It played a key role in the development of Renaissance, Reformation, the Age of enlightenment in official document, and the scientific revolution, laid the material basis for the modern knowledge-based economy and the spread of learning to the masses. William Caxton (1422-91) was a English writer and printer. He is the first person to introduce printing press technology at England Westminster in 1476 and was the first English retailer of printed books². The first book known to have been produced there was an edition of Chaucer's "The Canterbury Tales". The English language was changing rapidly in Caxton's time and the work that he was given to print were in variety of styles and dialects, he often faced dilemma concerning language standardization in the books that he printed. Caxton is credited with standardizing the English language through printing that is homogenizing dialects and largely adopting the London dialects, that is also called 'King's English'. This facilitated the expansion of English vocabulary the regularization of inflection and syntax and a widening gap between the spoken and written word.

The Chaucery standard of written English emerged in 1430 in official document that since the Norman Conquest had normally been written in French. These new standard were based on the east midland's influenced speech of London. Bureaucrats and Clerks using this standard were usually familiar with French and Latin influencing the form. Due to invention of printing press English language underwent a

homogenization process that had a fulminant effect on spelling, vocabulary, grammar and regional varieties of languages, thus resulted in the acceptance and recognition of different dialects. New concept needed new description, hence justifying the creation of new words or combination of words. In fact borrowings from languages such as Latin, Greek, French and Spanish added both complexity and richness to English language. The printing press, which helped in spreading information much more easily, was a communication revolution that introduced a torrent of new words and ways of recording work in English language.

III. ALTERATION IN ENGLISH LANGUAGE DUE TO INVENTION OF TELEGRAPH

The telegraph was the first major advancement in communication technology in 1838, Samuel Morse perfected and demonstrated the first telegraph machine, this machine used Morse code to send electronic currents along a wire allowing the first high speed long distance communication³. Fedrick Creed invented a way to convert Morse code into text known as Creed teleprinter. Creed's system received a major boost when the *Daily Mail* newspaper adopted it for daily transmission of entire content of its newspaper from London to Manchester. The invention of electric telegraph in 1840 has been described as the nineteenth century equivalent of the internet. For the first time language could be transmitted without the need of face to face interaction. Now fast long distance linguistic communication became a reality. Although, telegraph, had fallen out, due to widespread use of fax, telephone, and internet. But, it laid down the ground work for the communication revolutions.

As per the international Morse-code

- I. The length of dot is one unit.
- II. The dash is three units.
- III. The space between parts of the same letter is one unit.

IV. The space between letters is three units.

V. The space between words is seven units.

VI. Some codes are

- A ○ □
- B □ ○ ○ ○
- C □ ○ □ ○
- D □ ○ ○
- E ○

To increase the speed of communication the code was designed so that the length of each character in Morse is approximately inverse to the frequency of occurrence in English language. Thus the most common letter in English 'E' has the shortest code that is a dot. Telegraph coded style is a clipped way of writing that attempts to abbreviate words and pack maximum possible information into the smallest possible number, words or character. Related but distinct is the historical practice of using abbreviations and code words to compress the meaning of phrases into a small set of character for ease of transmission.

Some examples of telegraphic coded expressions are

- (i) Emotion- Think you had better wait until
- (ii) Empaled- Think well of partly mentioned
- (iii) Nalezing- Do only what is absolutely necessary
- (iv) Nalima- Will only do what is absolutely necessary
- (v) Nallery- It is not absolutely necessary but it would be an advantage
- (vi) S.O.S. – Extreme distress used especially by ships at sea or by military, it stands for save our soul.

IV. ALTERATION IN ENGLISH LANGUAGE DUE TO INVENTION OF RADIO

G. Marconi (1874-1937) was an Italian inventor and Electrical engineer is known for his long distance wireless Radio transmission or wireless telegraphy. He invented Radio in year 1895 and first radio station was established at Pittsburg, Pennsylvania in United States

of America (Nov. 1920). English was the first language to be transmitted by Radio. Radio has had the biggest impact on mass communication and thus development of English language. The British Broadcasting Company in 1922 begins transmission influencing dramatically the way English language is used and spoken. This led to improvement of the quality of English language by standardizing its use for massive global reach thus the number of English language speakers has grown exponentially. Indian Broadcasting Company was established in year 1927 and started broadcasting from Mumbai and Calcutta. The B.B.C. World service has been highly influential in disseminating news but also in English language teaching⁴. It has a very wide deep reach to almost all parts of Globe that until other technology would not have reached and it has developed English as a lingua franca.

Radio broadcast included not only news and music but dramas, comedies, variety shows etc. Radio was unique method of dramatic presentation using only sounds. Linguist takes more interest on spoken form than written one. Radio dramatically created sound to connect to audience like squeaking door, approaching horse or clacking typewriter. Majority of languages are built up out of only 30 to 50 sounds, these are called atoms. Linguistic purism vanished as a result of code switching that is being utilized by the radio presenter. Also led to mixing of two languages which is code mixing or hybridization for example English mixed Hindi coined a new term that is Hinglish. This is extensively observed in the multilingual and multicultural communities.

V. ALTERATION IN ENGLISH LANGUAGE DUE TO INVENTION OF TELEVISION

The world first electronic television was created by a 21 year old inventor, named Philo Taylor Farnsworth, in year 1927. Television series or program can be placed into the following categories: crime, drama,

reality show, documentation, soap opera, comedy, talent show, game show, dance competition, news and sports⁵. Television and other forms of media are homogenizing English language. Television shows have contributed some words and expressions to the vocabulary. Television buzzwords catch phrases are even make it into the dictionary. For example “doh”, Homer Simpson’s smack in the head lament is now part of the Oxford English dictionary. According to the editors doh (spelled without apostrophe) means expressing frustration at the realization that things have turned out badly or not as per plan, or that one has just said or done something foolish[source: libaw]. Result of findings by Rahila P. Gowon (African research review) indicate that both television and radio have a positive influence on speaking skills of viewer or listener but no effect on writing skills.

VI. ALTERATION IN ENGLISH LANGUAGE DUE TO INTERNET AND SOCIAL MEDIA:

Concept of internet begins with the development of electronic computers in the year 1950. Initial concept of wide area networking originated in several computers including the development of ARPANET project Robert Taylor and by Lawrence Roberts⁶. The first message was sent over the ARPANET in 1969. In 1980, research at CERN in Switzerland by British computer scientist Tim Berners-Lee resulted in World Wide Web, linking documents into an information system, accessible from any node on the network. In mid 1990’s the internet has had a revolutionary impact on culture, commerce, technology, and on English language also. It gave exponential rise in use of e-mail, instant messaging and voice over internet protocol, telephone calls, video-calls, blogs, social networking-sites and online shopping-sites etc. Email altered the structure of the letter as a communicative tool; it brought with it a whole new etiquettes as well as new conversations and abbreviations. Such as IMO (in my opinion), NRN(no reply needed), IIRC (if I remember correctly), AEAP(as early as possible),

ASAP(as soon as possible), AB(action by), FYA(for your action), FYG(for your guidance) and FYIP (for your information please). It also introduced that WORDS IN UPPER CASE ARE SHOUTING, while lower case is the accepted form.

The rate and extent of change in English language by mobile users is truly astounding. Some example “Brdnd” is the broadband, “Dnt be wstfl” means “Don’t be wasteful”. There are now even more baffling growth of key social networking sites like – My space, Bebo, Facebook, Whatsapp, Twitter, QQ, Instagram, Wechat etc. The watch word today are user generated content(UGC). So, to sum up email + texting + blogging + social networking sites = people writing more than they speak and less they used to write. Also one of the basic driving element in this transition is the screen size of mobile phones is small and therefore text messaging was always by default short and short inevitably becomes shorter. Length of word and phrases were reduced, so, that the meaning remains intact while the effort and amount of screen space used were minimized. Digital communication alters language use but it does not eradicate the traditional language, it moves side by side. Some abbreviations used by mobile users are “LOL”- Laugh out Loud, “YOLO”- you only live once, “BAE”- Baby, “GPS”- Global Positioning system, “ANS”- Advanced Network System, “BS”- Base Station , “CDMA”- Code Division Multiple Access.

VII. ALTERATION IN ENGLISH LANGUAGE DUE TO ARTIFICIAL INTELLIGENCE AND ROBOTICS

Artificial intelligence (A.I.) is intelligence demonstrated by machines, in contrast to the Natural Intelligence (N.I.) displayed by humans and other animals. Artificial intelligence has been officially started in 1956 at Dartmouth College, where the most eminent experts gathered to brainstorm on intelligence simulation⁷. Colloquially, the term “artificial intelligence” applied when a machine

mimics “cognitive” functions that humans associate with other human minds such as “learning” and “problem solving”. These also include successfully understanding human speech, especially English Language. The work in speech recognition goes back to 1950’s when researcher at Bell Laboratories worked on it. Research in the area was boosted by America’s Defense Advanced Research Projects Agency (DARPA) in 1970. DARPA established Speech understanding research (SUR) programme in year 1970, to develop a computer system that could understand continuous speech. Lawrence Roberts initiated this project in 1971 when he was director of Information processing technique office (IPTO). Robert wanted a system that could handle a vocabulary of 1000 English words. DARPA began funding speech recognition research on a large scale again in 1984 as of the strategic computing programme. English language speech assistant (ELSA) is mobile application that uses AI to help people to improve their pronunciations. The Chinese publishing company Cheevis Publishing has gone a step further, offering the collection of poetry “Sunshine Misses Windows”. These poetries are created by the computer algorithm using AI, out of which it memorized more than 500 sonnets, from which it created 10,000 poems, out of which 139 were published. Nowadays, work of interpreter is also taken up by computers, for example SYSTRAN is a free Chinese or German to English online translator. There are many other software are also available viz. Bing, Lingutec, Prompt, Pons-Lingenio. Collins translators are also available which can translate words of French, German, Spanish, Chinese, Portuguese and Hindi to English and vice-versa.

Word robot was introduced to the public by the Czech interwar writer Karel Capek in his plays P.U.R.(Rossems Universal Robots), published in 1920. In Czech robota means “forced labour”. A social robot is an autonomous robot that interacts and communicates with humans following social behavior and rules. Social Robots are recent development, since

1990, using artificial intelligence. Recently Sophia a social humanoid robot developed by Hong-Kong based company Hanson Robotics, in collaboration with AI developers, including Google’s parent company Alphabet Inc, who built her voice recognition system, and SingularityNET, which powers her brain. It was activated on April 2016, made her first public appearance in mid of march 2016 in Austin, USA. She is able to display more than 62 facial expressions. In October 2017, Sophia became a Saudi Arabian citizen, the first robot to receive citizenship.

VIII. CONCLUSION

As long as the needs of language users continue to change, so will the language. Language change is a variation over time in language is phonological, morphological, semantic, syntactic and other features. Language changes for several reasons. It changes because the needs of its speaker’s change viz. Advent of new technologies, arrival of new products, and new experience require new words to refer to them clearly and efficiently. Technological advancement has changed English language forever. In 1476, William Caxton introduced printing press technology to English language and literature. Caxton is credited with standardizing the English language through printing in homogenizing dialects and largely adopting the London dialects, that is also called ‘King’s English’. This facilitated the expansion of English vocabulary the regularization of inflection (change in the form of verb) and syntax and a widening gap between the spoken and written word. It played a key role in the development of Renaissance, Reformation, the Age of enlightenment in official document, and the scientific revolution. . Due to invention of printing press English language underwent a homogenization process that had a fulminant-effect on spelling, vocabulary, grammar and regional varieties of languages, thus resulted in the acceptance and recognition of different dialects. With the invention of Telegraph in year 1838 fast long distance

linguistic communication became a reality. This was the base for further communication revolution. Morse code led to abbreviations and code words to compress the meaning of phrases into a small set of character for ease of transmission. Marconi invented Radio in 1895 had a biggest impact on mass communication and thus development of English language specially phonetics. Linguistic purism vanished as a result of code switching that is being utilized by the radio presenter. This also led to mixing of two languages which is code mixing or hybridization. After invention of Television, T.V. shows have contributed some words and expressions to the vocabulary. Radio and Television homogenized English language. Both television and radio have a positive influence on speaking skills of viewer and listener, subsequently, but have no effect on writing skills. After, promulgation of World Wide Web in 1980 led to linking of documents into information system, accessible from any node on the network. In mid 1990's the internet has had a revolutionary impact on culture, commerce, technology, and on English language also. It gave exponential rise in use of e-mail, instant messaging and voice over internet protocol, telephone calls, video-calls, blogs, social networking-sites and online shopping-sites etc. Email altered the structure of the letter as a communicative tool; it brought with it a whole new etiquettes as well as new conversations and abbreviations. With the invention of AI work of translation and interpretation can be done easily. Nowadays, online translators are also available which can translate words of French, German, Spanish, Chinese, Portuguese and Hindi to English and vice-versa. Social and talking Robots are recent development, since 1990, using artificial intelligence.

IX. REFERENCES

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