

PalArch's Journal of Archaeology of Egypt / Egyptology

THE RISKS OF TECHNOLOGICAL DEVELOPMENT: IMPACT ON MASS MEDIA AND SOCIAL LIFE OF PEOPLE

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Mushabbiha Farhin: The Risks Of Technological Development: Impact On Mass Media And Social Life Of People-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(7). ISSN 1567-214x

Keywords: technology, development, modernization, risks, social life, new media, social networking

ABSTRACT

Today's world has been facing an upsurge of technological developments which are benefiting the humankind. But alongwith it new kinds of risks are also coming in. A new kind of modernity is rising. This article aims to highlight the advancement of technology and its impact on mass media and social life of people.

Introduction

Medias are the collective communication outlets or tools used to store and deliver information or data. It is either associated with communication media or the specialized mass media communication businesses such as print media and the press, photography, advertising, cinema, broadcasting including radio and television and publishing. The term media can simply be termed as one of the means or channels of general communication in society which includes newspapers, radio, television etc. The mass media is a diversified collection of media technologies that reach a large audience via mass communication. Mass media are the tools or technologies that facilitate dissemination of information and entertainment to a vast number of people. These tools mediate the messages; they are not messages themselves. In the words of Wilbur Schramm, "Mass Medium is essentially a working group organized round some device for circulating the same message, at about the same time, to large numbers of people". The term 'mass' suggests that the modern media are experienced not by individuals and groups in terms of their own cultures but as a part of the

‘mass’ and as ‘mass culture’. Cinema, radio, television, cable and the press can easily be recognized as ‘mass media’ but books, magazines, pamphlets and direct mail literature and posters also need to be included in the label because their reach extends to vast heterogeneous masses of the population. In today’s definition of mass media, there is also the inclusion of the term called ‘new media’ which includes pagers, iPods, cellular phones, satellites, computers, electronic mail and the internet. All these changes in the form and application of mass media came due to the technological revolution which occurred from time to time.

Mass Media and Technological Advances

We live in a world where we rely on a variety of old and new media for information, entertainment, and connection. The beginnings of mass media and mass communication dates back to 560 years to the “print revolution” that occurred in Europe in the fifteenth century. As society progressed, mass communication evolved from a mechanical process to electronic transmission, which paved the way for the digitized world of today. While technological advances are an important part of the narrative regarding media, the effects of media are also important to consider. It is noteworthy that mass media can exist only through technology. While our interpersonal interactions are direct, our interactions with mass media messages are indirect. In this process, ‘technology’ act as a ‘third-party’ in the communication process. Technological revolution affects the functioning of mass media to a great extent. Along with technical revolution, the mass media also gets revolutionized. In this context we can talk about ‘Modernization Theory’. Modernization theory is used to explain the process of modernization within societies. Modernization refers to a model of a progressive transition from a ‘pre-modern’ or ‘traditional’ to a ‘modern’ society. With the publication of Daniel Lerner’s influential book ‘The Passing of the Traditional Society’ in 1958, the potential role of communication in promoting development was glorified. The idea that communication can transform societies quickly became the dominant paradigm. Prominent figures of modernization theories like Daniel Lerner, Wilbur Schramm and Everett Rogers presented communication as a crucial factor in development.

We can apply this theory of modernization while talking about the process of development of a society from a traditional to a modern one where new media replaced the old ones or reduced the importance of old forms of mass media. This can said to be a threat to the existence of the old forms of mass media. As we trace the development of different forms of mass media, take note of how new technologies and competition among various media formats have made media messages more interpersonal and personalized. In short, the mass media that served large segments of the population with limited messages evolved into micro-media that serve narrow interest groups.

It is also interesting to note the speed with which technologies advanced from a traditional to a modern one. As we move closer to our current digital age of

media, we can see that new media formats are invented and then made available to people more quickly than media that came before. For example, while it took 175,000 years for writing to become established, and about 1,000 years for printing to gain a firm foundation as a medium, audiovisual media (radio, television, and movies) penetrated society within a few decades, and digital media gained prominence in even less time. (Poe,2011).

(Ref: *Marshall T. Poe, A History of Communications: Media and Society from the Evolution of Speech to the Internet (New York: Cambridge, 2011), 164*).

The “manuscript age” is the period in human history that immediately predated the advent of mass media and began around 3500 BCE with the introduction of written texts and lasted until the printing revolution of 1450. Before writing emerged, humans drew cave paintings and made sculptures, pottery, jewelry, and other forms of visual expression. The spread of writing was a necessary precursor to the print revolution.(Biagi,2007). The printing press and subsequent technological advances related to paper manufacturing and distribution led to the establishment of print as the first mass medium. Books and newspapers were the main forms of printing mass media at that time. But newspapers have faced many challenges which can include, the increase of Internet-based news, leading to a major decline in readers. A combination of number of discoveries of electro-magnetic waves, the wireless telegraph and the triode by technicians and scientists from different countries gave rise to development of wireless telegraphy and later to radio broadcasting. Later, it became the main media of mass culture. The first radio station was set up in Pittsburg, New York and Chicago in the 1920’s to broadcast election news, sporting events and opera performances. After radio, technological advances took a drastic way to change the outlook of media usages. Then came the notion of audio-visual media. The growth and spread of print as a mass medium took hundreds of years because of the lack of and resistance to literacy, which made the printed medium spread less quickly than audio and visual media. Humans evolved to talk, look, and listen, as evidenced by the fact that we have body parts/organs that help us do these things. Television was introduced in the year 1959 in India. But experiments in television broadcasting were initiated in 1920s in the United Nations and Europe. Humans like to both watch and listen to something at the same time.(Biagi,2007).As with the birth of any mass medium, technological advances had to take place to move us from interpersonal or group engagement with visual media to mass engagement. In the 1830s, the technologies needed to create photographs were put together in Europe, and photos were in regular circulation by the 1840s. By the late 1800s, photographs could be mass-produced and included in existing print-based mass media like books, newspapers, and magazines. In the 1890s, Thomas Edison commercialized film, creating a motion picture company and demonstrating the new technology at expos and fairs and inviting guests to come watch short movies of people doing mundane things—for a fee, of course. At the same time, advances in sound recording and wireless transmission of sound were occurring, which was

essential to bring together the audio and visual elements of modern movies and television. Movies became the first mass medium to combine audio and visual electronic communication. Movie technology developed more quickly than television because it didn't have to overcome challenges presented by electromagnetic transmission and reception. Network and broadcast television was forever changed by the growth of cable and satellite technology. Although the mass medium is still the same, the increased competition led to further development and changes to how we, as users, interact with and experience the medium.(Biagi,2007).

The digital age is said to begin in 1990 and it continues till date. Whereas media used to be defined by their delivery systems, digital media are all similarly constructed with digital, binary code made up of ones and zeros. Instead of paper being the medium for books, radio waves being the medium for sound broadcasting, and cables being the medium for cable television, a person can now read a book, listen to the radio, and access many cable television shows on the Internet. In short, digital media read, write, and store data by using numerical code, which revolutionized media more quickly than ever before (Hetland). The Internet can be said to be a decentralized communications and information network that relies on the transmission of digital signals through cables, phone lines, and satellites, which are then relayed through network servers, modems, and computer processors. The development of digital code made way for the Internet and all digital media. Thus technological advances made a revolution in the forms of mass media from the print to a digitalized one.

(Ref : Shirley Biagi, *Media/Impact: An Introduction to Mass Media*(Boston, MA: Wadsworth, 2007), 173–74)

Technological Revolution: Pros and Cons

Technological development has had a strong impact on the way society communicates, particularly with its acceleration in the last few centuries. From the invention of the telegraph and telephone to the advent of the Internet, technology has given people tools to not only keep in touch with each other, but also express their feelings and opinions to a broader audience than would otherwise have been possible. Technological advances can said to have both positive and negative impacts upon the communication world. The worst sufferers are the old forms of mass media.

Albert Bandura's *Social Learning Theory* states that people learn through observing others' behavior, attitudes and outcomes of those behaviors. He states, " Most human behavior is learned observationally through modeling : through observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action". He talks about some necessary conditions for effective modeling such as – attention and retention. This theory can be applied in case of accepting new technology in the place of old ones. Though at first people remain

unaware about the new technologies, gradually by observing others they come to know about the usefulness of a more advanced technology of communication. Slowly they start to adopt new technology in place of old ones. Here, the process of globalization and modernization also plays a significant role. For example, earlier letters were the dominant form of written communication which has now been replaced by e-mails or text messages sent through phones.

Everything has a positive and negative impact, and the impact of technology on the communication process also comes as a mixed bag. Though the main concern here is about the risks of technological advances but still I would like to highlight some of the advantages of technological revolution-

Keeping in Touch

Technological advances have brought the world closer, making communication across long distances easier. Telegrams are faster than letters; phone calls, in turn, are faster than telegrams. Then comes cell phones that take this one step further, allowing people to call and speak with each other regardless of their location. Online communication of all types is the most efficient which includes programs and apps such as Skype, iChat or Google Video Chat, Zoom, WhatsApp and so on making it possible to see the person you are speaking with rather than just hear his voice.

Help Doing Business

The technological advances have improved personal communication and have also had the same beneficial effects on business. Communication between colleagues is not a problem now. Whether they are a few rooms or a few countries apart; video conferencing allows companies to have workers scattered around the globe while but still hold efficient meetings and discussions; business networking is made easier by social media and online networks designed specifically for that purpose, such as LinkedIn. This is helping the companies to expand beyond their local market and gain a wider customer base simply by being active online.

To Overcome Disabilities

Technology has been a great help to differently abled people. Hearing aids boost the hearing of partially deaf people, making it easier to understand speech, while cochlear implants restore hearing to the completely deaf. Speech-generating devices give people with severe speech impairments a way to express themselves. Advances in technology may also result in functional brain-computer interface systems, restoring the ability to communicate to people who have lost it entirely, such as sufferers of locked-in syndrome.

Reaches a Broader Audience

People's ability to communicate has been improved by technological developments. Alongwith it, the ability to receive messages has also been improved. For instance, photos and video recorded covertly through a cell phone can be quickly and easily shared online through websites such as YouTube, social networks such as Facebook and Twitter can be used for various purposes such as to organize and coordinate meetings as well as protests.

As mentioned earlier, the modernization process plays a significant role in the change of the communication process and with it the mass media. Modernity's relatively stable representation of identity is no longer adequate when the subject is played out in cyberspace. Enrollment of actors is done by statements such as, "We are becoming citizens of the new Net community. We are all cyborgs (a mixture of human and machine) in love with our prostheses: computers, the Internet, and virtual reality," and "Those who can navigate the electronic highways will be the winners in the information society"(Cees,2004).Social life unfolds in cyberspace, and the users make their own rules. In short, technological developments have lead to a great change in the social life of people. To understand technology use, one must look to young people. New types of expertise are crucial, and young people are the forerunners in this respect.

Cons of Technological Development : What are They?

The development of technology has considerably improved our lifestyle. It has made its impact felt on each and every aspect of life, including communication techniques. Each century has seen a new addition to the ever-growing list of means of communication. The invention of the telephone by Alexander Graham Bell in the year 1875 was the first technological invention that impacted communication in humans to a massive extent. Other subsequent inventions like that of the Internet, cell phone, etc., further eased and changed the world of communication (Wasim et el,2012).Mobiles and the Internet are literally basic necessities these days. A majority of us would feel something missing in life, if there were no mobiles or Internet. If we take the daily routine of a person in this tech-savvy world we will come to notice that he day begins with a "good morning message" on a mobile app and ends with a "goodnight" on the same app. The social networking apps/sites are, like a virtual world different from that of the actual world. We are now moving to a 'hyperrealistic' world where we are unable to differentiate reality from a stimulation of reality. There is excessive use of mobiles and the Internet for communication, use modes like online chats, emails, teleconferencing, video conferencing, networking sites, etc., among other tools. Mobiles, emails, and social networking sites are the most popular means of communication among the current generation. Technology has transformed the once big and far world into a tiny village, as McLuhan like to call it a 'Global Village'.

Talking about the negative impacts of technological advancement upon the mass media, there are many. The most prominent negative effect of technology

can be said to be that the charm of the good old world is missing. Technological revolution has hampered or reduced the importance of mass media like print media. The coming up of something called 'new media' has been one of the major reason for decline of the old mass medias. The letters, and lengthy and expressive face-to-face conversations have gone away, and have been replaced by texting or chatting. The current generation lacks essential interpersonal skills. A major reason for this is the increased frequency of communication through texting and chatting on websites. This has an effect on nonverbal communication as well. Technological means have also affected nonverbal communication. The worst of all is the social networking sites. Many teenagers are always hooked to the social networking sites. They are closer to online friends, but the gap between parents and kids has increased considerably. They get too much indulged in the sites or to say their phones that they cannot even notice what is happening around them. Communication is lacking and the generation gap is also increasing as parents are not techno-savvy to the communication styles of the kids. Consider socializing among people. People have become addicted to the Internet and cell phones, and this has led to many anxiety disorders. People addicted to the Internet feel lonely and isolated. Many people abuse social networking sites. This tendency has done more harm than good.

There has always been a conflict between the 'old' and 'new' forms of mass media. In the book entitled, 'New Media – A Critical Introduction – Second Edition' by Martin Lister, Jon Dovey, Seth Giddings, Iain Grant and Kieran Kelly there has been a mention of six main characteristics of new media which helps in earning them a victory over the old media. They are – Digital, Interactivity, Hypertextual, Virtual, Networked and Stimulated. New media have been the most popular trend in the last few years. It is considered as a part of everyone's life and that is used daily. New media is technology, internet and any form of communication such as social media and websites. New forms of Information technologies have replaced the old ones. The internet is regarded as 'Information Superhighway'. This superhighway has reduced the use of other information sources or other forms of mass media like television, radio and newspaper. Moreover, the highly digitalized notion of e-commerce, e-banking and e-governance has also come up due to technological advances. (De Moragas, 1990).

Concluding Remarks

In a nutshell, we can say that technological advances has been and always been a threat to the mass media and now it plays a great role on social life of people, continuously impacting and mending it. The "mass media" industry has lost its independence. Communication, and in particular the new forms of communication, depend today, more than ever, on the development of technology and on the conditions in which it is introduced; on the home consumer market's absorption capacity, but even more on its industrial and military application and on the capacity of the economy to make the

investments profitable. The key concept is that "social communication" no longer depends exclusively on sociopolitical factors, such as freedom of speech, or even on economic factors linked to the market itself, but that "social communication" begins to depend heavily on other forms of "transmission of information". The communication system is today being interpreted in a very distorted manner as a result of the influence that the advertising campaigns promoting them are having on public opinion.

New technology is growing in an unbalanced and heterogeneous way, adapting to the various economic and social conditioning factors in each community. Technological communication is a double-edged sword. It all depends on how we use these means; we should use the technological means of communication for sane purposes, and not abuse them for malicious motives.

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