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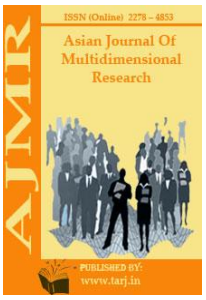

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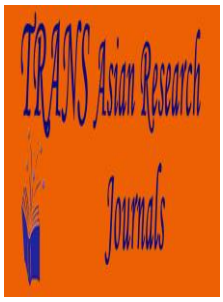

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SPECIAL ISSUE ON SOCIAL ASPECT OF NEW MEDIA IN NETWORK SECURITY

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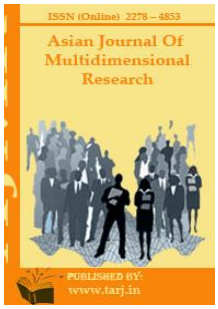

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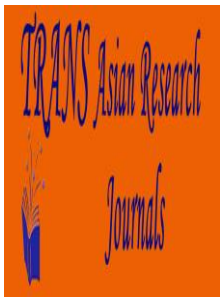

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NEW INFRASTRUCTURE FOR SOCIETY: MORDEN TECHNOLOGY

Padmavathi S*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id: padmavathi.s@presidencyuniversity.in

ABSTRACT

The rapid advancement of technology and the evolving needs of society have necessitated the development of new infrastructure systems to support the changing landscape. This chapter explores the concept of new infrastructure for society, encompassing various sectors such as transportation, energy, communication, and urban planning.In transportation, new infrastructure involves the implementation of intelligent transportation systems, including smart roads, autonomous vehicles, and advanced traffic management systems. These innovations aim to enhance efficiency, reduce congestion, and improve safety. Additionally, the integration of sustainable transportation modes such as electric vehicles and bike-sharing programs contributes to the creation of a greener and more accessible urban environment.

KEYWORDS: *Connectivity, Digitalization, Energy Grid, Green Infrastructure, Intelligent Transportation Systems, Renewable Energy, Resilient Infrastructure.*

INTRODUCTION

New roads are being built at tremendous speed and yet we hardly notice.After all, bulldozers aren't razing the landscape and laying down railways, canals, or tarmac. These routes are for communication and information. They seem to be a part of an ethereal, dim world. They may be seen by us as just another cable coming into our houses. They are introducing yet more technology into our lives without our knowledge. We are connected to computer networks like the Internet in addition to roads, power cables, water pipelines, gas pipes, sewers, post boxes, telephone wires, and cable television.Expressions like we live in a connected world, a connected age, a human web, and a web society are often used in contemporary literature. At first glance, this appears somewhat odd considering how often individualization, social fragmentation, independence, and freedom are discussed at the same time. After all, these two ten- dencies might be two sides of the same coin, so this coincidence is not that remarkable after all. At least, that is what this book contends. The world may have never been freer, but it has also never been so interconnected and dependent, said Albert Einstein[1][3].

The usage of networks has taken over our life on a personal level. In a sophisticated culture, we may add between five and seven hours of leisure time each day on average by adding the time spent on broadcast networks, telephone, and the Internet. The time spent with them at work and school doesn't even begin to compare. When we look at how people use social media, we can estimate the number of hours they spend in meetings of all types. Although we have become more individualized and live in smaller, technologically advanced homes, we have not become less sociable humans.Almost every business in the industrialized world is now totally reliant on

computer and phone networks. When they fail, the company just ceases to function. Organizations had previously divided into separate organizations, departments, and teams that continued to collaborate in an extensive division of labor even before they became so reliant on these media networks. Nowadays, businesses don't complete their own goods or services. This is accomplished via internal and external economic network collaboration and rivalry.

We can observe that media networks, social networks, and economic networks stretch into the farthest reaches and margins of the planet at the level of society and on a global scale. The globe has become really interconnected. Developing nations like China and India quickly transition from being pre-industrial cultures to being industrial mass societies, and in certain cases, post-industrial network societies, thanks to the fast expansion of satellite TV, mobile phones, and the Internet. The complete definitions of these words are provided below.We may reasonably refer to the twenty-first century as the age of networks. Networks are evolving into our society's central nervous system, and we may anticipate that this infrastructure will have a greater impact on every aspect of our social and personal life than did the development of highways in the past for the movement of people and products. 'Information highway' is a suitable phrase in this context. The design of such fundamental infrastructures is essential for the subsequent possibilities and threats. Early in the 20th century, we decided to favor small-scale private transportation over extensive public transit, but we had no idea what the results would be. But the repercussions are now all too clear to us. Global warming, environmental deterioration, and traffic congestion are all too real. It may be harder to see, but there will still be serious repercussions if we choose a certain kind of communication infrastructure and integrate it into our social and private life.

According to this line of reasoning, in addition to the social ecology, which will partially replace the movement of commodities and people, the ecology of nature is also at risk in this situation. As a result, when the new media first emerged in the 1980s, some individuals spoke about how the new media was polluting our social environment by penetrating our personal lives. They said that face-to-face interactions were becoming less effective and even being destroyed by the new medium, which also increased the formality of workplace connections. They would lead to less privacy and complete top-down control. These gloomy viewpoints were supplanted in the 1990s by utopian viewpoints that the new media will significantly improve communication and quality of life. A new economy and a new age of freedom, wealth, and online democracy were on the horizon.

In the initial Dutch translation of this book, I promoted a robust public discussion on such anticipated effects of new media. Somewhat of this appeal was heeded. Discussion about the advantages of the Internet and the potential of the so-called electronic highway, which was first coined in the United States in 1993 as the information superhighway, received a significant boost, particularly between 1994 and 1998. During those years, much of the conversation was theoretical. In an chapter and mostly theoretical way, utopian and dystopian viewpoints were enumerated and contrasted.After more than 25 years of experience, we can now construct a more balanced or syntopian picture of the growth of new media in the first decade of the twenty-first century. This time, we can make judgments based on data from empirical studies. This book's major goal is to do that.This book shows how the emergence of new information and

communication technologies, in which networks are already setting the tone, puts our society's core principles at jeopardy.

Since certain demographic groups engage in the information society more than others, social equality is under jeopardy. While some benefit from its perks, others suffer. Knowledge may be more effectively distributed thanks to technology. However, because to its complexity and price, it may exacerbate already-existing social disparities or possibly result in the emergence of sizable populations of misfits who do not fit in with the information society.In theory, democracy should be strengthened by the new media's ability to increase direct contact and engagement between informed citizens, workers, and customers and institutions of decision-making. On the other hand, democracy may be jeopardized since the technology is open to top-down control. Some contend that the interaction this technology offers will improve freedom, such as the freedom of choice for customers. Others paint a harsher doomsday scenario, predicting that freedom would be threatened by a loss of privacy for the individual as a registered citizen, a transparent employee, and a customer who is checked for every personal trait, as well as by the expanding prospects for centralized control.

All types of registration and alarm systems may increase safety for certain groups of individuals as well as for society as a whole. At the same time, safety seems to be declining as a result of our increased reliance on technology. And a technology that is really weak at that.If communication technology makes it possible for us to communicate easily with practically everyone, even across great distances, the number and quality of social ties may increase. On the other side, they may decline as a result of their propensity to encourage some individuals to retreat into computer communication and to engage in only safe, self-selected social contexts. In this approach, face-to-face contact may completely be replaced by new media communication, lowering the quality of communication in certain ways.Because of the variety of perceptions, we get from these new mediums, the human mind may become more complex. On the other hand, it could also be diminished since these perceptions are provided in schematic, programmed, and fragmentary frames that are devoid of context. Additionally, information is accessible in such large quantities that the receiver can never completely comprehend it.

DISCUSSION

A Second Communications Revolution?

The accounts of media history point to the sequential emergence of several new mediums. In reality, the last two centuries have seen two distinct clusters of innovation in the media, the first of which can roughly be dated to the latter half of the 19th century and the beginning of the 20th, and the second to the latter half of the 20th century and the early years of the 21st. In his book The Control Revolution, James Beniger was the first to describe and analyze the first concentration and its history. Frederick Williams was the first to name the second concentration in his book The Communications Revolution. The first and second communications revolutions of the contemporary era are something I dare to discuss. Whether it is suitable or not, the term revolution is often used in the history of business and technology. In reality, every purported revolution took decades to accomplish. Because technical progress is often considerably more evolutionary than revolutionary, great technological advancements are seldom revolutionary. A

protracted period of planning comes before innovations. It would be false to imply that new technologies appear out of nowhere. Instead, they are a synthesis of past methodologies. We should consider what specifically is novel about new media and if the word revolution is appropriate in this context. I wouldn't dare use the term revolution if there was only a sizable quantitative acceleration of the advent of innovations in the two concentrations already stated. For anything to be referred to be a revolution in communications, structural adjustments or qualitative technological advancements in mediated communications must occur[4][6].

There have been a number of communications revolutions throughout media history. Technical communications revolutions and structural revolutions may be distinguished from one another by the way they affect space and time coordinates. Media may enable communications between locations or they can be a fixed type of communication in space. Additionally, they provide us the ability to bridge time or fix the moment of conversation to a certain time.The two first communications revolutions in human historytransmitting messengers to bridge locations and sending smoke, drum, and fire signals across large distancesmark the transition from communication fixed in space and time to communication spanning space and time. Making drawings on pottery and in caves was how time was transmitted, leaving behind messages for future generations.

The invention of writing, which allowed people to transcend both place and time, was the next and perhaps most significant structural communications revolution. This book's topic, the most recent communications revolution, is largely a structural revolution. The divide between media that are fixed in space and time and media that span these dimensions is finally coming to an end. After all, both purposes may be served by new media. Despite the fact that the goal of spanning time and space is the main one, new media may also be utilized in offline settings, such as when consulting a CD-ROM or DVD. Computer networks and personal computers are examples of offline and online media that make up the new media. They are a fusion of artificial memory and transmission lines that may also be deployed in other devices.

Media For Speech, Consultation, Registration, and Dialogue

Since media history up to now has been characterized by revolutions that span space and time, the new media call for a departure from this model. The mix of online and offline applications of new media, utilized in both offline media contexts that bridge both dimensions and conventional social environments that are fixed to a certain time and place, results in the fundamentally novel properties of these media. This book will show how this combination contributes to the realization of possibly the most promising social viewpoint of the new media, which is a potentially beneficial interaction between local face-to-face conversation and online mediated communication rather than their replacement.In a technological communications revolution, links, artificial memory, and/or the reproduction of their contents all undergo significant change. A revolution in the reproduction of writing occurred with the invention of the printing press. A second revolution occurred in the second part of the 19th century. It was primarily a technological revolution driven by the development of long-distance cable and air links, new analogue artificial memory, and innovative reproducing methods.

The creation of media enabling the direct transmission of sound/speech, text/data, and pictures across many channels and large distances was qualitatively novel. Long before the turn of the nineteenth to the twentieth century, the telegraph and telephone were developed, and telex, radio, and television followed soon after. Between 1890 and 1925, they underwent an innovation, which is defined as a first introduction in a useable form. Another 50 years were required for widespread introduction. Digital artificial memory, digital transmission, and digital reproduction are the defining features of the most recent technological communications revolution. In this context, the phrase digital revolution is acceptable. The present communications revolution's developments follow a similar trajectory. The innovations happened in the last fifty years. Large mainframe computers that could handle databases or act as number crunchers were created in the early decades after World War II, along with satellite communications. Then, starting in the 1960s, smaller but more potent computers that functioned as generic symbolic machines concerned with interactive information manipulation and communication networks were developed. Through the development of several generations of personal computers, computer networks, terminal equipment, software, and services, we have now moved beyond the stage of innovations. Their widespread implementation in offices, classrooms, homes, and public spaces is now taking place all over the globe.Until roughly 2040, this trend will presumably continue.

We can now respond to the crucial question: How has the present structural and technological communications revolution increased quality? It's not because you can instantly speak with everyone in the world if you have the tools to do so, or because the important coordinates of distance and time appear to be scaled down to negligible dimensions. In other words, it is not the case that, to borrow a common expression, the world is turning into a village. This would just entail an evolution along the axes of space and time, which had already occurred with the 19th-century communications revolution. It would'merely' speed up this evolutionary process. No, the three distinguishing traits of new mediaintegration, interaction, and digital codecan be used to sum up the core of the present transformation.

Essential Features of New Media

Integration

In this, I provide three descriptions of the new media. I first provide a definition of the new media as a synthesis of three traits. The usual information and communication patterns that may be seen in their application are then covered. Finally, I discuss their communication capabilities' strong and poor utilization characteristics.The combination of mass communications, data communications, and telecommunications into a single medium is the key structural feature of new media. It is the convergence process. This is why new media are often referred to as multimedia. Integration may occur at one of the aforementioned levelsinfrastructure, such as merging various transmission channels and tools for computer and telephone communicationstransportation, such as online TV and Internet telephone using cable and satellite TVmanagement, such as cable companies that abuse phone lines and phone companies that abuse cable televisionservices, such as the Internet's integration of information and communication services.combiningdifferent sorts of data: sounds, data, text, and pictures.The distinct definitions of mass communications, data communications, and telecommunications will likely eventually vanish as a result of this merger. We'll refer to things like multimedia,

broadband, the Internet, and the network. The shows how public and private data, tele, and mass communication networks are combining to build multipurpose, high-speed networks that were formerly known as electronic superhighways but are now more often referred to as broadband. Two ground-breaking methods facilitate this integration process:

Interactivity

While the first method provides full integration of data and telecommunications, the second method is more pertinent for integrating mass communications in the convergence process.The development of interactive media is the second structural new media feature of the present communications revolution. Interactivity is, in a very broad sense, a series of actions and reactions. It is astounding how badly this important idea is defined and operationalized for media and communication studies study. An exhaustive description of the arduous quest for a precise definition by social and communication scientists has been written by Jensen. The idea of interactivity is one that Jensen himself wants to reserve for mediated conversation. An operational definition provided by Van Dijk and de Vos is said to be applicable to face-to-face communication as well. These writers acknowledge, like many other authors, that interactivity is a multidimensional phenomenon and describe it at four cumulative levels. To describe how interactive a certain digital media is, the degrees of interaction should be suitable.

The ability to create two-sided or multilateral communication is the most basic degree of interaction. This is the dimension of space. In some ways, all digital mediums provide this opportunity. But more often than not, the uplink or the retrieval done by their users is significantly less than the downlinked connection or the supply side of websites, interactive television, and computer applications.The degree of synchrony is the second level of involvement. The time dimension is as follows. It is common knowledge that interactions are often of higher quality when action and reply occur continuously. However, because to their lack of synchrony, certain interactive mediums, like email, are employed. One may choose the times and locations while sending and receiving messages, and one can take more time to consider their response. However, this comes at the sacrifice of quick responses and the capacity to communicate a variety of verbal and nonverbal cues at once.

Higher levels of control by the parties engaging are feasible when multilateral and synchronous communication is enabled. The degree of control that the engaging parties exert is therefore the third level of interactivity. The capacity of the sender and the receiver to exchange roles at any time is referred to as this behavioral dimension. Additionally, it concerns having control over the interactions' occurrences. The most crucial aspect of all interactive definitions used in media and communication studies relates to control. It denotes paying attention to the power dynamics at play in interactions between people in face-to-face and mediated communication. At this level, interactivity includes, but is not limited to, the user's ability to influence the program or interaction directly. The user's actions must result in a significant change on the other side. Otherwise, the process cannot be said to be truly interactive. Digital media offer a change in the power balance to the user and the side of demand since they are more interactive than conventional media. This promise, however, is not completely realized in the current applications of digital media, where a supply-side perspective still dominates the medium's design.

The fourth and greatest degree of interaction is when all participants act and respond while being aware of contexts and meanings. For example, in physical dialogue and computer-mediated communication, this mental component is a need for complete involvement. Except for people who have great faith in interactions guided by artificial intelligence, this degree of interactivity is currently reserved for mediated and face-to-face connection between humans and animals with awareness. Only the structure of new media activities is defined by the technical media characteristic known as digital coding. However, it has significant negative effects on communication. Every piece of information and communication may be turned into and communicated as strings of ones and zeros called bytes when utilizing digital code, with each 1 or 0 representing a bit. The natural codes used in the analog generation and transmission of information and communication are replaced by this artificial code[7][9].

The uniformity and standardization of these contents is the first significant result of the translation of all media materials into the same digital code. Contrary to popular belief, form and substance cannot be readily distinguished from one another. The shape of digital code is not neutral. It begins by first chopping up a number of unbroken analog bits of communication and information before recombining them into digital versions of pictures, sounds, messages, and numbers. These forms are created using the same fundamental code as well as similar languages, such HTML, which is a visual code for World Wide Web sites. When computer software is used to create the forms, they are renowned for having very identical menu and navigation layouts. The proliferation of information and communication is another result of employing universal digital coding. Their creation, recording, and distribution are all greatly facilitated by this code. Unlimited quantities of things are generated thanks to computers' and their disks' continually increasing storage capacity. The breaking up of large units of information and communication, such as texts, images, sounds, and audiovisual programs, from their traditional linear order into hyperlinks of items liable to be perceived and processed in the order that the reader, viewer, or listener wants is the final and, arguably, most significant, effect of using digital code.

Without digital code, this transition from linear to hypertext media would not have been conceivable. This'revolution' in the creation and consumption of media will have significant social and cultural repercussions. In this book, they will be completely detailed, notably in sections 8 and 9. The three features that characterize new media at the turn of the 20th and 21st century is all present at once: they are interconnected, interactive, and employ digital code. Therefore, multimedia, interactive media, and digital media are their most popular other names. It is simple to distinguish between new and old media using this concept. Traditional television, for instance, is integrated since it has text, sound, and pictures but is neither interactive or dependent on digital code. As it just transmits voice and noises and does not use digital code, the traditional telephone is interactive but not integrated. Interactive television, on the other hand, includes both interaction and digital coding. In addition, the latest iterations of fixed or mobile telephony are completely digitalized, integrated, and linked to the Internet. They can also send text, photographs, or videos[10], [11].

CONCLUSION

In conclusion, a new infrastructure for society includes a variety of industries and technology, all geared toward meeting the changing demands of the contemporary world. Societies may provide

the groundwork for a more effective, inclusive, and resilient future by adopting intelligent transportation, renewable energy, improved communication networks, and sustainable urban design. Governments, the business sector, and communities must work together to successfully execute new infrastructure in order to assure its efficacy and long-term benefits.

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COMMUNICATION CAPACITIES OF THE NEW MEDIA

R Ravikumar*

*Associate Professor,
Department of Media Studies,
Presidency University, Bangalore, India,
Email Id: ravikumar.r@presidencyuniversity.in

ABSTRACT

The emergence of new media platforms and technologies has significantly transformed the landscape of communication, presenting both opportunities and challenges for individuals, businesses, and society as a whole. This chapter explores the communication capacities of the new media, focusing on their potential to connect people, disseminate information, foster engagement, and shape public discourse.New media platforms, such as social networking sites, online forums, and instant messaging applications, have revolutionized interpersonal communication by enabling individuals to connect and interact with others across geographical boundaries. These platforms provide a space for individuals to share ideas, engage in discussions, and form communities based on shared interests. The accessibility and immediacy of new media communication have facilitated the rapid spread of information, allowing individuals to stay informed and participate in public conversations.

KEYWORDS: *Interactivity, Mass Communication, Mobile Devices, Multimedia, Online Communities, Real-Time Communication.*

INTRODUCTION

Two-sided or multilateral communication is the initial level of interaction, as was previously indicated. When Bordewijk and Van Kaam created their typology of the four information flow patterns of allocation, consultation, registration, and dialogue, they did so with this idea in mind. As will be the case in this book, they have shown to be very helpful in social and communication research. They provide light on the power-related features of the communication infrastructure as well. Finally, they demonstrate how the patterns of consultation, registration, and dialogue develop in the new media from the pattern of allocution that characterized the old media. As they converge into fully integrated networks, they do so by becoming more engaging and integrated.The pattern of speech has been more important in communication mediums in the 20th century. In this century of scale expansion and massification, radio, television, and other mediated performances have taken center stage. They are built on a pattern of allocution: the simultaneous distribution of information to an audience of local units by a center that acts as the source of and decision agency for the information. As a result, they play significant coordinating roles in society.

This tendency is not enhanced by new media. The only exceptions are instances when old broadcasting methods provide viewers and listeners with additional options, such as pay-per-

view and home-video programs with feedback channels at a viewer's or listener's discretion. Here, the local unit is able to co-determine the information to be received the topic, the time the information is consumed, and the agenda of future broadcasting by reactions to current programming and by replies to questions presented, all within the parameters and menus supplied. However, rather than improving the pattern of allocution, these changes actually worsen it. As a result, in the context of new media, this pattern evolves into the following one[1][3].The new mediums improve the consultation pattern. Consultation is the process by which local units choose information from a center that serves as its source, deciding on the information's topic, timing, and pace. Book, newspaper, magazine, radio, and video are examples of traditional consulting media. Encyclopaedias on CD-ROM or DVD, interactive television, teletext and other cable TV information services, and, of course, the plethora of information websites on the Internet are some examples of modern consultative media. These media are to be seen as a fundamental enhancement to the pattern of consultation since they provide new avenues. They often use internet links that allow for more center-level dialogue than traditional media. Additionally, they are competing with allocutive media, just as audio and video equipment did in the past with radio and television.

In the new medium, registration chances are expanding as well. A center that controls the topic content, timing, and pace of information supplied by a number of local unitswho are the information's sources and sometimes take the initiative for this collection themselvesis known as a registration center. In traditional media and data collecting methods, the center often not only makes decisions but also initiates communication requests. Examples of these media and tools include investigations, elections, audits, archives, and camera-based visual observation. These tasks are already largely carried out the traditional media. The opportunities provided by modern media are considerably greater. And their numbers increase when new mediums are used. online polls and inquiries are two examples of this. However, the new media also provide additional opportunities for the center to register at the local units' initiative, such as with electronic reservations, teleshopping, and telebanking. When the situation is the opposite and the center takes the registration step without the local units' consent, a more significant issue occurs. This might apply to telemetry, remote electronic surveillance, or the monitoring of personal data without the subject's knowledge or consent.

The conversational pattern undergoes the most basic shift. A conversation is an information exchange between two or more local units that addresses a common medium rather than a center and chooses the topic, timing, and pace of information and communication on their own. The current routes for communication are expanded and now have the capacity to hold additional types of data. Old media simply provided space for voice and a little quantity of information. The ability to transmit data and text has grown exponentially thanks to local computer networks and data transfer through telephone lines. The ability to integrate audio, data, and text in a single communication is a significant new feature that the new medium has brought. Then, photographs could be used, and nowadays, moving visuals may also be included in these communications. Broadband facilities, which until recently were only accessible in public networks of mass communication, are needed for this qualitative expansion of the spectrum of conversational alternatives. Since the 1990s, sophisticated or intelligent networks on a wider scale have been

introduced for research and defense institutions, initially at the organizational level and then for mass communications, data communications, and telecommunications.

A combination of allocation, consultation, registration, and discourse in a single medium is implied by the emergence of integrated networks. Such a medium would thereafter become sufficiently significant in social communication to allow us to talk of a communications revolution, the outcomes of which would serve as the main subject of this book.

There has been a definite movement towards local units in the four information flow patterns as they have evolved. Allocution shifts to consultation, registration, and dialogue as a result of the new media. The opportunities for communication have risen as a result of local units' initiative and choice, as well as their interaction with the center and among themselves. However, this does not imply that these chances will be seized. That depends on the nature and circumstances of the communication that is being held. Combining voice, text, data, and visuals as well as having a better grasp of place and time might increase user opportunities. On the other side, they may be constrained by supply and management of new media. One-sided supply, restricted access, and greater chances for central control, manipulation, and registration might all undermine privacy. A revolution in mediated communicationsand maybe all communications in our societywill result from these potential and how they are actually used. With the advent of new media, we will be able to choose consciously between face-to-face and mediated contact across a wide range of social activities for the first time in history. This book's main emphasis will be the results of this decision[4][6].

DISCUSSION

Numerous studies on the advantages and drawbacks of mediated communication in comparison to face-to-face contact have been conducted during the last 25 years. The methods of communication and task completion have been thoroughly examined in social-psychological investigations among small groups utilizing various media. The most common strategies are two. The first starts with the purely objective properties of media and channels. The second, mostly in response to the previous strategy, highlights the subjective aspects of their usage. The notion of communication capabilities is developed in this work using a comprehensive strategy. This idea was designed to provide an answer to the question of what can be accomplished with new media. What distinguishing features do they have over traditional media? The general characteristics of integration and interaction have already been discussed. I'll now describe nine of the so-called communication capabilities of new media. First, a quick explanation of how the idea of communications capacity came to be is necessary. The first social-psychological approach in this field focuses primarily on the shortcomings of all media and communication channels in comparison to face-to-face interaction. Short and colleagues popularized the idea of social presence.

It highlights the warmth, intimacy, friendliness, and sensitivity of face-to-face conversation, which technology can only partially convey. All media and face-to-face conversations result in a varied sensation of presence among communication partners thanks to these attributes, which are assumed to be objective. For instance, compared to the audiophone, the videophone gives more social presence.The so-called decreased social context cues of the media of telecommunications

and network computing are an essentially comparable approach. The concerned psychologists claim that important nonverbal and contextual cues are often underrepresented in media. Daft and Lengel have differentiated the following four objective qualities of media: feedback capability, channel utilized, nature of the source, and linguistic richness in their considerably more expanded definition of information richness.This kind of traditional social-psychological study came under growing fire in the second half of the 1980s. Its objective methodology could not be used to explain a significant number of events. It seems that social, emotional, and even romantic communication often takes place via mediums that lack social presence and information richness, such as email and SMS texting. Phone helplines and phone sex both experienced the same phenomena. After some habituation, computer networks see a rise in the volume of informal and intimate contacts. A culture of electronic communication with new rules, vocabulary, and behavior eventually develops.

Integrated Strategy

A more social-cultural or sociological approach stressing subjective social construction processes has emerged in response to the social-psychological methods previously outlined, which essentially confine social reality to communication that is interpersonal and related to location. The first social information processing model was created by Fulk et al. They were curious as to how people really utilized the media in their everyday lives and how subjectivity affected how people processed social information via the media. In the early stages of computer-mediated interactions, this is anticipated to be influenced by people's perceptions of and attitudes about media as well as those of others in their immediate social surroundings, most often their coworkers. A overview of this viewpoint may be found in Fulk and Steinfield.Walther has put out a similar strategy. According to his relational approach, various purposes and circumstances call for varied uses of the media. His experiments' findings indicate that after a while, the quality of CMC approaches that of face-to-face conversation. The social presence and decreased social context cues approaches' assertions and this conclusion are completely at odds with one another.

Spears and Lea's experiments provide credence to Walther's analysis. Their social identity theory postulates that individuals bring their whole social, cultural, and personal identities into computer network conversations as baggage, which explains why mediated and face-to-face communication are roughly equivalent. The mental construction and creative strength generated from this identification are thus adequate to make up for the limits of the medium.I have suggested a comprehensive strategy that is both objective and subjective. This viewpoint maintains that it is crucial to begin the examination with the structural, more or less objective characteristics of the media, both old and new. There are too many differences between their practical use and subjective interpretation to allow for any kind of generalization. Furthermore, it is untrue to say that media lack any objective qualities. One instance in a female-focused American internet conversation about personal female encounters ought to be persuading. The ladies were astonished and offended when it was revealed, after a while, that a male psychotherapist using the alias Julie had been participating. This incident just could not have occurred in most other mediums[7][9].

Media, therefore, do have unique potentials and constraints that cannot be subjectively erased. They are referred to as communication capabilities in this book, a term that denotes both defining

and enabling characteristics. We may compare old and modern media in a methodical approach by using the nine communication capabilities listed below: speed, reach, storage capacity, accuracy, selectivity, interaction, stimulation richness, complexity, and privacy protection. Here is a brief explanation of these abilities. These abilities are contrasted in 1.1 between traditional and contemporary media.One of the new media's major traits is how quickly it can communicate over vast distances. They resemble the telephone and radio in this way. One may send a message halfway across the globe in a minute by using the Internet and email. Print media and in-person interactions can only immediately link people who are close to one other.

The new media have a very broad potential geographic and social reach. In the future, the convergent networks of communications, computer networks, and broadcasting may link the whole planet. They are now connected to practically every area and nation in the globe, first via the telephone and the Internet. Demographic reach, however, lags behind as only a tiny proportion of people have access to the Internet and only approximately half of the world's population has ever used a telephone.The new media's enormous storage capacity is another significant point. Face-to-face communication, which relies on poor human memory, has a limited potential for this. Before answering machines, it was likewise low in telephone use. Compared to written and analog broadcast media, one can store a lot more information with digital media.

In comparison to the telephone and face-to-face communication, one significant benefit of new media is the correctness or exactness of the information delivered. The later media often use unclear signals. Historically, print media have benefited from accuracy. Governments, politicians, and managers can now effectively handle the growing complexity of society and organizations because to the new media's storage capacity and accuracy. Without ICT, many procedures would spiral out of control and become mired in red tape. Another potent ability of modern media is the selection of messages and addresses. In face-to-face contact between groups and other collectives, this ability is quite low. Here, people are required to schedule appointments and keep their distance from one another. With the exception of personal letters, most print-based communication is not addressed. Likewise with broadcasting. The first truly selective means for addressing individuals was the telephone. By allowing us to methodically choose groups via email lists and other tools, the new media enhance this potential. One may speak to highly particular target groups in this fashion. This is a capability that is already commonly employed in American politics and business.

Although the new media are sometimes referred to as interactive, their degree of involvement falls short of that possible in face-to-face communication. The general interactivity of new media that was previously mentioned must be defined in terms of the specific degrees and varieties of interactive capabilities that may be seen in both old and new media. Some new media don't provide much more than two-way communication and a central store-and-forward organization acting as a kind of answering machine. This obviously applies to email. The user has virtually little influence over the material in other new media, such as interactive journalism, broadcasting, or digital information services. The user doesn't do anything. instead, he makes choices from menus and responds. Additionally, there is a lack of fully developed discussion in the new medium. One cannot exchange all the required signals. Even video conferences, which

allow for some visual contact, have their limits. The perception of distance between conferencees is still evident, and so-called kinaesthesis is essentially missing.

Face-to-face communication is unmatched by any other media in terms of the variety of stimuli it can provide. The cause is obvious: today's new media are all sensory deficient. This is particularly true for computer networks that just carry data and lines of text. When combined in various ways, multimedia provides a broader variety of stimulipossibly even an overloadincluding text, pictures, sounds, and data. However, the fusion of these impulses is artificial rather than spontaneous. The movement and body language offered by someone who is near may be reinforced in certain stimuli while receding in others, but there is still a glaring absence in all cases. Therefore, the most sophisticated kind of teleshopping will continue to be distinct from a day spent shopping in a town.Because of the latter two abilities mentioned, the complexity that may be attained by combining them is not very great. According to research, utilizing computer networks makes it extremely easy to connect with people, ask questions, share information, and schedule appointments, but it seems more challenging to negotiate, make decisions, clarify complex situations, and really get to know someone.

The limited level of privacy protection that the new media's current architecture provides is a drawback. Face-to-face communication may be highly segregated. Press and current broadcasts may be accessed anonymously. The new interactive broadcasting and electronic press media are exempt from this. In actuality, all use information is recorded in fresh media, including often user-specific traits. Certainly, this applies to computer networks. It is less so for standalone computers and multimedia since they are user-controlled, but these devices still contain internal memory that may be accessed.

The Form and Concept of this Book

This book provides an overview of several social dimensions of new media organized within a certain framework. This book's initial Dutch version was written in the late 1980s, and for it, an inventory was prepared of all the societal issues that seemed significant at the time. The inventory grew and shrank with every new edition. Completeness is hardly achievable any longer as of the time of writing. The new media have assimilated into society to the point that they affect every element of it. Therefore, this book is not an encyclopedia on social elements of modern media. Although it is fairly thorough, it does not cover all of the literature. Although that has been revised in comparison to the initial English version, the overall remains inexhaustible. The last twenty years have seen the publication of a library's worth of books and essays on the subject of this book.

I do make an effort to cover social concerns in a very multidisciplinary manner. This is for important causes. I'll go into detail on how the so-called micro, meso, and macro levels are tightly connected in the network society and how many boundaries of demarcation between the various disciplines just disappear. One only has to be inter- disciplinary to understand the causes and effects of the introduction and usage of new media in current society. Of course, this will prompt the criticism that the treatment is incomplete from experts in technology, economics, political science, law, culture, and psychology. I'm willing to take a chance in order to get a more comprehensive grasp of the situation.The outline is constructed against a theoretical backdrop

that, in contrast to earlier editions, has been made more apparent. Four social and communication science ideas have served as motivation for this framework.

Network theory is the initial source of inspiration. Although social and communication science has known about this for many years, significant progress has been achieved in the previous five years. In order to identify the 'laws' or regularities of networks, social scientists have turned to natural scientists and mathematics for assistance. The framework connecting the social components has been expanded thanks to the most recent iterations of network theory, which has also improved the book's coherence. Here, I admonish social scientists to use a modest network strategy. Because I pay attention to both relations and the qualities of the units that are connected in networks, it is moderate.The theory of structuration is the second source. This theory's premise states that social structures and communicative behavior are both evolving. Technology, in my opinion, is both defining and enabling, and it shapes both humans and other living things. Another aspect of the character of this work is defined by these presumptions. It is repeatedly shown how the new media affects man, society, and organizations in terms of both possibilities and hazards, optimistic and pessimistic views, utopian and dystopian viewpoints, etc. The presumptions also help to understand why this book includes policy viewpoints based on a variety of explicit social ideals in addition to observation and analysis.

The third realization is based on the so-called medium hypothesis. According to this idea, media and technology have both enabled and defined human history. They possess a variety of objective traits that must have a special impact on users in their social settings. The communication skills that were described above serve as an example. The main claim is that media and technology are social settings in and of themselves. Clearly, media networks fall under this. The Internet, which has evolved into its own civilization, is the book's most compelling example. One of the primary claims in this book is that social and media networks are increasingly fusing together to form a unified reality.Contemporary modernization theory, not the one propagated in the 1950s and 1960s extolling the virtues of western civilisation, serves as the last source of inspiration. The world's cultural clash between the west and other civilizations is more accurately observed by current modernization theory. This book uses modernization theory to explain how networks connect local and global social relationships as well as how scale-extension and scale-reduction processes function in society.

Three sections make up the book. Basic terminology and statements are defined in the first portion, which is made up of ss 1 through 3. The foundational words are in 1. The most crucial element of the theoretical framework is presented in 2, which covers network theory and an explanation of the idea of a network society. The network society's technical foundation is described in 3. I made an effort to write this in a way that should be comprehensible to those who are not technical.The book's core content is an examination of the social implications of new media on many societal levels and domains, including those of the economics, politics, law, social infrastructure, culture, and people. I've added introductions and conclusions to the sections of this second portion in this second English version. I'm hoping that this will increase the book's cohesion and didactic value.Every book I've written in this topic ends with policy views. I'm not content to only provide my readers scientific analyses. After students understand the overwhelming influence of modern media on their society, I don't want them to feel powerless.

The hazards and benefits of the new media for society may both be used. One of the aspects that sets this book apart from its primary rival, Manuel Castells' great trilogy The Information Age, is its attention to policy views.

Networks: The Social Nervous System

Classifications for the Network Society and Others

The sort of society that develops in response to the usage of information and communication technology has access to a number of notions. The information society is the most well-liked idea. This notion, along with the idea of a network society, is used in this book to describe current developed societies that are characterized by a high degree of information exchange and the use of information and communication technology. The changing nature of these societies' activities and processes is highlighted by the idea of an information society. The idea of a network society focuses on the evolving organizational structures andsocietal organizational frameworks.I begin with my own thorough descriptions of various sorts of societies and continue with a variety of qualifiers and comparisons to other categories like capitalist society and modern civilization.The information intensity of all activities increases to such a high level in an information society thata social structure founded on reason, reflection, and sciencean economy that is increasingly defined by information creation across all values and sectors, including the agricultural and industrial ones.

A society dominated by media and information goods with their signs, symbols, and meanings. a labor market where the majority of functions are primarily or entirely focused on information processing jobs requiring expertise and higher education.We may call it a new sort of civilization because of how intensively information is processed across all of these domains. The semi-autonomous nature of information processing is the defining characteristic of the changes brought about by the increased information intensity of all activities. The majority of actions in modern civilization are focused on tools, in this instance tools for creating and processing information. These endeavors often diverge from their primary goals in favor of gaining momentum and justification on their own[6], [10].

CONCLUSION

In conclusion, the new media's communication capabilities have completely changed how people interact, participate, and share information. These platforms have made it easier for people tothe difficulties and assure the appropriate and ethical use of these communication capabilities for the advancement of society, considerable thought and critical involvement are necessary. New media's ability to communicate does, however, present certain difficulties. Due to the availability of information and the absence of editorial oversight, there are problems with false information, echo chambers, and the dissemination of hate speech. Concerns about information overload and the fuzziness of the borders between news and entertainment have also been highlighted by the 24/7 news cycle and the quick speed of communication.

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CLASSIFICATIONS OF CONTEMPORARY SOCIETY

Sarath A Pradeep*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id: sarath.pradeep@presidencyuniversity.in

ABSTRACT:

Understanding and classifying contemporary society is a complex task, as it encompasses a multitude of social, economic, cultural, and political dimensions. This chapter explores different classifications of contemporary society, highlighting key frameworks and perspectives used to analyze and categorize societal structures and dynamics.One prominent classification of contemporary society revolves around economic systems. Capitalist societies, characterized by private ownership of the means of production, market competition, and profit-driven motivations, dominate the global landscape. However, within capitalist societies, variations exist, ranging from liberal market economies to more regulated welfare states. Additionally, alternative economic models, such as socialist or mixed-market systems, offer distinct approaches to resource distribution and societal organization.

KEYWORDS: *Capitalist Society, Consumer Society, Digital Society, Global Society, Industrial Society, Information Society, Knowledge Society.*

INTRODUCTION

The concept of a network society lays a lot of emphasis on how information is structured, processed, and transferred. Infrastructure for social and media networks manages this. As a result, the network society may be characterized as a social formation that has a network infrastructure supporting its main organizational structure at all levels. These networks more often link each component or part of this information. In western countries, the networked person is developing into the core component of the network society. The networked group in eastern cultures may still exist.This book contrasts the network society with the so-called mass society that came before it. A social formation is referred to be a mass society if its principal style of organization is influenced at all levels by a foundation of groups, organizations, and communities. The core elements of this organization are all kinds of reasonably large collectivities that arrange individuals.

Later on in this chapter, in the From Mass Society to Network Society chapter, and in the other chapters of this book, I'll go into greater depth about the network and mass society concepts. I want to draw your attention to a few characteristics of the ideas of the information and network societies in this part. Both concepts are divisive, and for good reason. According to Webster, all definitions of the information society include increased availability of information, information commodities, information professions, communication technologies, etc.. but, they are unable to identify the qualitatively unique features of this specific kind of society. Manuel Castells rejects

the notion of an information society as well, arguing that information has always been the foundation of civilisation. Instead, he puts forward the concept of a informational societya special kind of social organization in which the production, processing, and transmission of information serve as the main sources of power and productivity[1][3].The examples that follow show how human societies have been partly networked since the advent of speaking. The concept of a network society being anything particularly innovative has been critiqued as being an unsubstantiated, fashionable idea. Despite my attempts to alter the circumstance, this statement is now mostly correct.

These limitations suggest that alternative classifications of contemporary civilisation are still relevant. All of them are chapterions. Human civilizations are often made out of chapter connections across several fields that may be comprehended via other chapter concepts. In terms of economics, almost all contemporary countries are capitalist. One kind is said to be developed, and the other is referred to as developing. Politically, a society is more or less democratic. Governments may be categorized as statist like the few remaining communist countries, developmental like the majority of East Asian countries, welfare like the majority of European countries, or liberal like the United States, which promotes a market economy. From a social and cultural perspective, all current civilizations may be categorized as modern, post-modern, late-modern, or traditional. Modern society may or may not be environmentally sustainable.In this book, the fundamental classifications of the information and network societies will be related to these extra categories. For instance, in Chapter 4, we will see how a network economy affects capitalism, in Chapter 5, we will see how a network state and digital democracy may reform government, and in Chapters 7 and 8, we will see how networks like the Internet transform social life and culture in modern society. The influence of ICT on a sustainable society will be discussed in the book's numerous parts.

The long-term evolutionary processes of human civilization are a final requirement to meet, and they are susceptible to the conceptions of the information and network societies. They don't depict actual social institutions with certain historical beginnings and ends. To further clarify, it may be claimed that just as the network society did not develop in 1844 with Samuel Morse's installation of the first telegraph line, neither did the information society begin in 1751 with the publishing of the first volume of Diderot and d'Alembert's Encyclopédie. Modernizing Western civilizations developed into information societies in the 19th century as a result of the industrial revolution. Their social structure, organizational practices, and communication infrastructurewhich together in the 20th century defined a mass societygradually changed into those of a network society. Modern civilizations are thus making the shift to information and network societies. Compared to developing civilizations that are still in the mass society stage, developed, high-tech societies have made greater progress along this road. But human networking has a far older history than the previous 200 years.

DISCUSSION

An Overview Ofthe Human Web

As ancient as mankind itself are social networks. Since they first lived in tiny bands and tribes, humans have always talked more with certain people than with others. The early human bands

and tribes typically had between a few dozen and hundreds of members. This number was sufficient for individuals to retain close relationships with certain band or tribal members while maintaining less close relationships with other members. A scale of coupling and mating that avoided inbreeding was a clear biological imperative.Historically speaking, J.R. and W. McNeill The emergence of speech in humans is at least when the human network first appeared. Our ancient ancestors built social cohesion within tiny groups by conversing, sharing ideas, and trading products. Additionally, even on an occasional basis, bands engaged and spoke with one another. This is based on their 'bird's eye vision of global history' as a collection of growing and thickening webs, which was published in their excellent book The Human Web.

Networks in Historical Times

The McNeills depict the development of the planet as a series of five global webs. These webs expanded because of both biological need and the urge and ambition to achieve new scientific discoveries and material triumphs to enhance the quality of life. Additionally to speech and information in general, these webs also allowed for the flow of products, technology, ideas, crops, weeds, animals, and illnesses.In the earliest global network, tribes of hunters and gatherers dispersed throughout the globe. Africa, Asia, and Europe were all impacted by the flow of ideas, cultural expressions, technology, and DNA that spread to the Americas and Oceania. Up until around 12 000 years ago, when agriculture was developed, this early human social network was quite loose. By settling, humanity were able to maintain more regular relationships between a greater number of individuals on a local level.

The regional webs of settlements evolved into metropol- itan or city webs around 6000 years ago. They acted as repositories for knowledge, products, and diseases. These processes led to the development of the earliest civilizations in Mesopotamia, Egypt, the Indus, the Yellow River, Mexico, and the Andes. These civilizations initially forged ties between thousands of individuals, then between millions. For the first time ever, people connected really continued to be strangers to one another. The fundamental societies in which humans had previously lived were frequently transcended by vital interactions and ordinary transactions for the first time. Transport animal caravans crossed the land between these civilizations, while ships traveled along river and sea shores.

The Old World network, which emerged through the interaction and partial integration of civilizations in Eurasia and North Africa around 2000 years ago, was the third human network. It indicated the emergence of huge bureaucratic empires in Mexico, the Andes, the Mediterranean, China, and India. Hub and spoke wheels, better roads, larger ships, and alphabetic writing all contributed to significant advancements in transportation and communication. As diseases spread, religions fought, and many civilizations and their rural hinterlands not only adopted ideas, habits, and traditions from one other but also rejected them in favor of their own, the first tensions in the global web emerged.

Oceanic sailing brought Eurasian and American cultures into touch with one another starting about 1450, creating a truly global cosmopolitan network. It was a bloody battle in which European civilizations violently overpowered native American ones. Everything these civilizations had to offer, even deadly illnesses, was exchanged as a consequence. Between 1450

and 1800, an increasing number of individuals relocated to urban areas and joined growing social networks. Information spread more quickly and inexpensively as a consequence than ever before. However, most people in 1800 still worked as farmers and were illiterate, so they had little knowledge of the outside world and only sometimes interacted with foreigners.This final statement was altered by the global web, which spans the previous 160 years, the fifth form of human network. Urbanization and population expansion are prevalent during this time. The human network was thickening rather than just becoming wider. The amount and speed of communication both significantly increased. With the advent of trains, cars, and airplanes as well as telegraphs, telephones, radios, TVs, and, eventually, computers and networks, the quantity and usage of new modes of transportation and communication expanded[4][6].

The initial phase of this global web age is described in this book as a mass society defined by mass communication networks. The network society develops during the second phase. The worldwide human network has been more internalized as it has grown thicker, becoming society. It is no longer only expanding globally and growing more substantial. it is also profoundly altering the structure and operation of contemporary society. This is based on a variety of social and media networks that exist at all societal levels.I want to concentrate on the four key conclusions the McNeills have derived from the history of the human web before I go into depth about the function of networks and the traits of the network society. The first finding is that collaboration and competition have always coexisted in webs. Cooperation between individuals is maintained via communication. Specialization and the division of labor within a cooperative system may increase the wealth and power of a community. They also increase the stratification and inequality. Competition has always been a result of both the inequality inside a society and the disparity between societies. Rivals also exchange information. They are compelled to react, such as by working together with others.

The second finding is that the realities of social competition have generally pushed history in the direction of greater social collaboration, both voluntarily and forcibly. The degree to which civilizations and groups collaborated increased both their prospects of survival and competitive advantage. They gained financial, military, and epidemiological advantages as a result.A third conclusion drawn from history is that human web scales have a tendency to expand over time. They have also had an impact on history. The modern world wide web spans the whole planet. Nowadays, hardly no human community still thrives in solitude. The amount, speed, and significance of communications conveyed now are so great that they have an influence on modern civilization that cannot be compared to that of earlier cultures' communication systems. The importance of the network society notion in this book is largely due to this influence.Finally, it is necessary to draw the conclusion that the power of human communication, in both its cooperative and competitive forms, has increasingly had an impact on the planet. Urbanization, technology, and ecological effect have all increased along with economic and population expansion. Without the many linkages, movements, and exchanges of food, energy, technology, and money that make up the contemporary international web, we wouldn't be 6 billion strong.

A Network At Every Level

Networks' occurrence in both nature and culture. What is a network exactly? This wide overview of networks throughout human history raises the following question. After all, the idea is present

in both the social and scientific sciences. The next explanation and description must, unfortunately, be rather chapter, but a clear definition and expansion of the network notion here will facilitate future comprehension. A network is characterized as a group of connections connecting constituent parts of a whole. The components are known as nodes. Systems are a common name for units. Three components and two connections make up the least number of both. A relation is only one connection between two components. In both nature and mankind, complex systems are organized through networks.

A static and hierarchical organization describes the relationship of constituents in basic social and natural systems. For instance, the relationship between the components of molecules, atoms, and chemical compounds is set and follows a certain sequence. Change denotes a change from one unit to another. The components must be arranged in increasingly complex ways as matter becomes more complex, particularly when it takes on the characteristics of life. As life interacts with the environment and adapts to it for survival, it organizes in these ways. Networks are a rather complex kind of material and biological system organization. They create order from chaos by connecting different things in a certain manner. As soon as the constituents of matter and living systems become less fixed, chaotic conditions inevitably arise.

Less emphasis is paid to the individual pieces and units when the structure and relationships between the elements are emphasized. The emphasis of attention is not on the properties of units and components, including human beings, and how they are composed. The relationships between components are instead emphasized in every network approach in the scientific and social sciences. It is opposed to methodological individualism in research as well as atomistic conceptions of reality.Thus, networks exist at all levels of both complex materials and living systems. A few physical network examples are provided by Buchanan. The first is an ecosystem made up of the earth's surfaces, flora, and fauna, and the second is a network of rivers that organizes the downward flow of water into branches that may adapt to the terrain and various impediments. The number of examples increases in living systems. All multicellular creatures arrange their cells in networks. They develop unique systems, such a nervous system and a blood stream, as they get bigger. In actuality, networks are present inside cells. The DNA chain of genes is the most significant one. The complexity of life is now generally accepted in science to be governed by the interactions between the genes rather than the quantity of genes.

The human brain has the biggest neural system of any living thing on the planet. More and more neurobiologists and psychologists concur that the human mind uses higher-level neural networks arranged in mental maps in specific areas of the brain. These maps' relationship to one another also indicates a network shape. Even human consciousness, according to one of these neurobiologists with the finest reputation, Gerald Edelman, is thought to develop via connections between mental maps.As was previously said, social networks have been developed by humans at least since the development of speech. The components of these networks are social actors, and the connections are made via communication. The social networks at all levels and subsystems of society, I argue below. Humans have also developed a variety of technological networks throughout history. Examples include highways, canals, various distribution networks, and the computer and communications networks that are a significant topic in this book. The

latter networks become media networks when they are loaded with information and symbols to link human senders and recipients.

The link between social, technological, and media networks is the subject of this book. Together, they sculpt the network society's framework. For instance, in a discussion of the psychology of new media consumption, biological and neural networks also get some attention. However, social networks sponsored by media networks are the main focus of interest.At all societal levels and subsystems, social networks backed by media networks are accessible. There are four distinct levels. They are shown in the book, providing the first visual representation of the network society's chapter idea.Since units and components are not the main focus of attention from a network viewpoint, but rather relations, the initial and most fundamental level is the level of individual relations rather than the level of the person. This level reflects how people establish connections with their friends, acquaintances, neighbors, coworkers, fellow athletes, and other family members and friends in everyday life. The development of media networks on the Internet and in mobile or landline telephony now supports and intensifies this level.

Relations inside groups and organizations make up the second level. People form various different sorts of groups or collective agencies, some of which are transient and loose and others which are stable and permanent. Telecommunications and computer networks underpin every modern organization. Because they allow for virtual organizing at any size, they have a tendency to weaken rigid group and organizational structures. Many businesses now function internally as networks of essentially separate teams and initiatives. They get together to build network groups on the outside that collaborate to carry out certain tasks. As networks of information and communication technologies replace these restrictions, they may even develop into virtual organizations that are largely unconstrained by geographical, temporal, and physical conditions[7][9].

The degree of social connections is the third factor. A society that is supported by and connected by social and media networks is shaped by individuals, groups, and organizations. This is true for all societal subsystems. The term network economy, often known as a new economy, is becoming more and more common. 'Network state' is a term sometimes used in politics. This condition connects the several levels of public administration as well as the bodies and institutions of the government inside. It maintains close ties with semi-autonomous or privatized state agencies as well as organizations of people on the outside. The Internet has produced a massive linking structure of human activity's sources and artifacts in the cultural domain. Finally, the ever-stronger connections between social networks and communications networks employing email and mobile or landline telephone have increased the societal architecture of individual and group relationships.

The level of global interactions in the system of global societies and international organizations is the last level. According to the preceding explanation, the global web age has begun. This is brought about through extending organizational size and global linkages. International television, telecommunications, and computer networking provide considerable support for both.Analyzing the network society in terms of degrees of networking is crucial for comprehending it. Monge and Contractor have presented a compelling case for multilevel theories of networks in their insightful assessment of current Theories of Communication Networks. The term theory is used

in the plural since they support a variety of hypotheses that work together to explain occurrences at the many levels identified. The fact that the levels are connected among themselves is a crucial component of their case. They construct their own theories by connecting comments made at many levels, including those of the individual, pair, trio, group, organization, and interorganizational level.

I have already argued in favor of a multilayer view of the network society. This argument drew on fundamental assumptions about the make-up and organization of society as well as the historical development of media networks that are employed at every level. The Logics of Social Structure, Kontopoulos' methodological and philosophical work, develops such a fundamental viewpoint. He asserts that the world has to be examined as a level structure. Every level is based in lower levels, all the way down to the chemical and physical ones, therefore levels are not juxtaposed layers. Cross-level or inter-level analysis must thus be added to and used to complement same-level or intra-level analysis. Every level has unique characteristics that only pertain to that level. Such characteristics include, for instance, a person's personality, the degree of formality in a group, the degree of centralization in an organization, and the stage of social evolution.

Such a fundamental viewpoint is required in this book on the network society to understand the nature of networks as a specific kind of social organization. Between hierarchical and heterarchical global organizations, Kontopoulos draws a contrast. Networks undoubtedly fall under the last mode. The lower levels are completely integrated into the upper ones in a hierarchical fashion. To create units at a higher level, the units at these levels are just combined. Both groups and organizations and individuals contribute to society. The higher levels always take precedence over the lower ones is a second characteristic of the hierarchical method. It may be inferred from this that the upper level controls the lower one. The word hierarchy often has this connotation.A heterarchical organizational structure only partly incorporates the lower levels into the upper ones. The impacted units have relationships and structures that cross over with those at higher levels. These relations and structures include networks. They link these levels and cut straight through each level. Networks provide intricate connections between and within layers. They broaden organizational flexibility in this manner.

Network Multilevel Theory

The heterarchical method of organization indicates that neither the upper levels nor the lower levels are in charge. As opposed to this, a highly complex picture of determination from below, determination from above, and determination at the semi-autonomous level inside focus itself arises.People who cross the boundaries of the units they belong to to form connections with other people in groups, organizations, and societies they do not belong to are examples of this breaking through all levels of networks and building their own structures. The same holds true for groups that cross over into other communities or nations.The usage of computer and communication networks firmly supports these methods. Additionally, they connect the forms and degrees of mass, organizational, and interpersonal communication. The Internet connects them instantaneously and directly for the first time in human history. Mass communication was made possible by broadcasting and the press, while interpersonal and organizational communication

was supported by telephones, letters, papers, computer files, and meetings. The Internet, which is utilized for communication at all levels, has, however, eliminated this traditional division.

Thus, networks arrange relationships both inside and between social reality's levels or units. Every network approach, as has been discussed previously, emphasizes the significance of the relations as opposed to the connected units. This stance is radicaly defended by the conventional network methodology. It gives forms precedence over material. The social network analysis that adopts this method downplays the characteristics of the social units and what takes place within or between them, i.e., the communicative action of individuals who are using and creating rules, resources, and meanings, in favor of emphasizing the morphology of ties and nodes. I reject this formalistic, shallow approach in this work. I advocate a reasonable idea of a network strategy instead. This indicates, firstly, that the qualities of the units they connect are emphasised in addition to relations. When relationships and unit traits clash, the most intriguing things happen. This occurs, for instance, when the new digital communication networks, with their relationships spanning space and time in the global 24-hour economy, run afoul of the biological human organism's limitations, such as its daily rhythms and routines or need for rest, which are incompatible with the demands of the relevant technology and economy.

A second limitation of the radical network approach is that, contrary to Manuel Castells' assertion, networks are not meant to be the fundamental building blocks of modern society in this book. These fundamental components are now seen to represent people, homes, groups, and organizations that are increasingly connected via social and media networks. The person is becoming as the most significant fundamental unit of society in contemporary western societies. In other cases, the family, kinship group, or local community is typically the case. The all-encompassing network structure of contemporary societies is composed of the social and media networks that organizational and technical innovation have combined to create. The usage of the powerful metaphor of networks forming the nervous system of sophisticated high-tech society is justified in light of these two factors.

Reasons for the Growth of Networks

What are the reasons behind the increase in network activity in modern societies? A variety of historical and social causes are quite simple to explain. Finding the fundamental social structures and ways of orga- nization of cultures that explain the emergence of network structures is far more challenging. Let's begin with the social and historical causes. According to the McNeills, the present growth of information and communication networks is the culmination of the global web's evolution. This web is now thickening more than it is expanding. Globally and at ever-faster rates, there are an increasing number of people, animals, plants, illnesses, commodities, services, information, communications, new ideas, and innovations being transferred.Social justifications will place a strong emphasis on the social need and suitability of network formation and usage at all scales. At the individual level, we are seeing the growth of networking as an explicit and more structured way to meet people and strengthen social ties.

The term network individualization is used to characterize this process in the sections that follow. In a culture where people are becoming more individualistic, networking is clearly a social requirement. Networks may be thought of as individualization's social equivalents.

Corporations and institutions no longer operate in isolation at the organizational level. They are now included in a thorough division of labor. This division is being more structured into networks of collaborative entities. Additionally, in order to thrive in the market and meet social demands, businesses must open themselves up to their surroundings more and more. Organizations' traditional internal structures are disintegrating when external communication structures are added to them. They are more able to adjust to an environment that is changing quickly as a result of acquiring new combinations of internal and external communication.

Networks also result in a thorough rebuilding of society as a whole. As they assist businesses in their hunt for new scale levels, new markets, and new methods to govern and manage, they are dismantling outdated organizational models. In contemporary civilization, scale expansion and scale reduction activities are linked via networks. They favor localization and individualization on the one hand, and globalization and socializing on the other. They have expedited modernisation in this manner.These historical and sociological justifications are all legitimate, but they don't explain why networks are created to meet these social demands. What presumptive organizational advantage does networking and networks have? We need to go deeper and reference network theory, a theory that has advanced significantly over the last five years, to find the answers to these issues. Unfortunately, this forces the exposition to return to being rather chapter.

Systems are organized via networks, which are structures. Typically, network theory is a subset of systems theory and structural theory. Systems theory is the broadest of them all. According to this notion, a network is any system that connects at least three somewhat closed systems while yet being relatively open. The unit is a somewhat closed system. We now know that in order to build a network, we need at least three of them. Because they comprise components that largely interact with one another to replicate the unit in a predetermined manner, these units may be thought of as relatively closed systems. These closed units only become open systems if they are compelled, for one reason or another, to engage with their surroundings and connect with other units in a network. Complete control is lost in an open system and is replaced by chance and random occurrences. That makes room for modification and opportunity. The key to networks or networking as an organizational paradigm is this process of opening up closed systems.

Two forms of systems theory that have influenced network theory provide alternative explanations for this tendency for change. The first version was inspired by biology, whereas the second was inspired by physicists and mathematics. Systems are conceptualized as creatures that must adapt to a physical environment in order to exist, according to the biological inspiration. This is the tendency for change in this place. Networks may be seen as adaptive systems in this interpretation. A sophisticated adaptive mechanism, our brain is. For our bodies, the same holds true. Our communities and organizations are becoming more sophisticated adaptive systems. They are all comparatively closed. They must, however, adjust to a setting that is becoming more and more complicated. Here, networks as comparatively open systems help them. Axelrod and Cohen assert that three sequential processesvariation, interaction, and selectionthey derived from the theory of evolution lead to adaptation. I shall, however, address them in the sequence I believe is appropriate for this theory interaction, variation, selection, and retention.There is interaction first. Networks provide communication among and among system elements. For

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instance, they support communication between more people than previously in teams and projects by bridging departmental boundaries inside enterprises. This presents them with chances to modify and direct the company. Networks, especially telecommunication and computer networks, are reducing the boundaries of time and location that were historically separating the communicative behaviors of its members inside companies.

More variety results from an increase or intensification of interaction. First of all, scope varies as new network connections broaden the reach of information retrieval and communication. Everyone who uses the internet for business will be familiar with this concept: even if the experiences and interactions are brief, one must leave their tiny social circle in order to make new ones. This concept was known as the strength of weak relationships by Granovetter. One should not downplay the significance of strong relationships while acknowledging the relevance of weak ones. Variation goes deep as well. Through close connections and effective communication, our own comfortable environment provides opportunity for engagement and knowledge. Networks are strong as relatively open systems emerging from relatively closed systems, but always being connected to them because of the combination of variety in breadth and depth. A person who is networking maintains a base of operations rather than being a nomadic wanderer.

The selecting procedure comes last. By selecting the most effective activities and actors, networking's objective is achieved in this situation. Retention is aided by this in terms of adaptability and system survivability. For instance, a jobless person seeks employment, a business finds the best network of suppliers and clients, and a society adopts a specific policy, structure, or provision to protect itself from the effects of globalization.Systems theory's second iteration exposes a mathematical and physicist foundation. Here, systems are seen of as parts of both nature and society that may be linked in both orderly and ad hoc ways. Here, the inclination to change refers to nature's capacity to create order out of chaos. Networks have long been studied as graphs, which are mathematical constructions. graphs the possible connections between a group of components in a certain unit. The psychologist Stanley Milgram made the social-scientific conclusion that, on average, every resident of a particular unitin this example, the United Statesis connected to every other resident through six intermediaries, or six degrees of separation. Only the additional fact that individuals are grouped together and tightly connected may account for this strange reality. The sociologist Granovetter discovered a phenomena in which these groups are often connected by what are known as weak links. Many mathematicians and physicists have migrated to social science in the vein of Milgram and Granovetter to generate significant network theory findings that will be ed in the s and s to follow.

This particular application of network and systems theory seeks to explain how clusters of randomly dispersed components that make up a unit or system connect to one another. A complex systemin this example, a complex societythat is extremely adaptable to environmental change is developed in this manner. It is still unclear how order develops in a system with many interacting equals but no preexisting center. The explanation is connectivity: all parts of the system act as if they can communicate with each other, despite their inter-actions being purely local during a crucial moment or phase transition in the system. This turning point is reached when there are enough long-distance linkages connecting a lot of local individual units arranged

in various clusters. In this manner, a large-scale or global environment is transformed into a so-called small world. Because two components connecting to a common third element are more likely to form a connection than two elements chosen at random, these miniature worlds contain internal linkages and show order. Compared to a stranger, your buddy's friend will be easier to get to know[10], [11]. In today's culture, social and media networks progressively build little worlds and clusters such that any two people or organizations may be linked by a short chain of middlemen. As a result, claims that our world is linked and that society is becoming more interconnected become commonplace. Basically, that it is becoming into a network society.

CONCLUSION

In conclusion, the complex character of social structures and processes is captured by numerous frameworks and viewpoints used in classifications of modern society. Among the most important factors taken into account when categorizing and analyzing civilizations are their economic systems, cultural norms, political frameworks, and social stratification. Understanding these divisions offers insights into the complexity and variety of modern society, assisting in problem-solving and the development of plans for social advancement and well-being. Societies may also be categorized according to social inequality and stratification. Class-based classifications look at how societies are divided and ranked according to things like wealth, income, education, and employment. These divisions bring out inequalities and patterns of social mobility, illuminating how opportunities and resources are distributed. Understanding modern society and its dynamics also heavily relies on other stratification factors, such gender, race, and ethnicity.

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A INTRODUCTION ABOUT MASS SOCIETY TO NETWORK SOCIETY

Rajesh Sisodia*

*Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id: rajesh.sisodia@presidencyuniversity.in

ABSTRACT

The concept of society has evolved with the advancement of information and communication technologies, leading to the emergence of the network society. This chapter explores the transition from traditional society to the network society, highlighting the key characteristics, dynamics, and implications of this societal transformation.In traditional societies, social structures were primarily shaped by geographic proximity and face-to-face interactions. However, the network society is characterized by the pervasive presence of digital networks and the internet, which have profoundly impacted social relationships, communication patterns, and the flow of information. The network society is characterized by the interconnectedness of individuals, organizations, and institutions through a complex web of digital connections.

KEYWORDS: *Communication Technology, Connectivity, Digital Revolution, Globalization, Information Age, Internet, Mass Media.*

INTRODUCTION

We are now prepared to comprehend the key differences between the network society and the mass society. In this comparison is made. This will serve as both a summary of the points made and an introduction to the sections that follow, which discuss the network society in more depth.Earlier in history, the term mass society was used to refer to a social formation having an infrastructure of communities, groups, and organizations that forms its primary method of organization at all levels. All different types of reasonably large collectivities are the primary elements of this structure. The McNeills refer to this period as the era of the global web, and it is characterized historically by the mass society. During the Industrial Revolution, when enormous populations of people gathered in industrial centers and commerce hubs, this civilization developed. The traditional communities that were already present in neighborhoods and villages were mostly retained when they were joined on a greater scale in cities and countries, which was typical of these concentrations[1][3].

Large houses and extended families in the relatively small communities of a village or a city neighborhood make up the fundamental building blocks of mass society. Other mass relationships, such closely cooperating shifts and departments, start to form in major corporations. The fundamental units or elements of mass society are homogenous. This does not imply that there is no internal opposition or conflict, but rather that the characteristics and social structures of all the units involved are substantially the same. For instance, the big households

are made up of typical nuclear families, which include a mother, a father, and a number of children. Local communities are characterized by geographic closeness and are also comparatively homogenous or unitary.Scale expansion characterizes the mass society. Governments, corporations, and other organizations all continue to expand and become into bureaucracy. They grew across continents and the whole globe to build a world network of empires and multinational corporations in the 19th century. The reach of the mass society is still localized, however, since the arrangement of its fundamental parts is related to specific locations and local communication still predominates. The mass society is an amalgamation of disparate, mostly homogenous local areas. The physical co-presence of its members distinguishes these fundamental groups or units of the mass society. High connection inside and limited connectivity outside, according to this.

The majority of strong relationships in the mass society are extremely densely clustered, and there are only a small number of weak ties that connect these clusters across great distances in diffuse network topologies.Internal relationships are consolidated in the mass society's organizational units. Organizational models that are vertically integrated and bureaucratic are prevalent. The national, regional, and local governments, the military, a few large enterprises, churches or other cultural organizations, and a small number of mass media are among the relatively few extremely powerful centers. The opposite of centralization is that relationships are also very inclusive. There are many members who are linked, and few of them are separated or excluded. Compared to the network society, the mass society is more characterized by solidarity.

Every unit in a mass society only has access to one or maybe a few of each sort of mass media, such as one local news source, one national source, and one or a few radio and television stations. As a result, the number of media is minimal by today's standards in network societies. They are all essentially broadcast media. However, in the mass society, face-to-face contact is far more significant than mediated communication.The mass society's social and communication framework is being attempted.The structures of the mass society were progressively superseded by the structures of the network society during the course of the 20th century. First, this occurred in advanced or contemporary cultures. The causes of this replacement will be examined in the sections that follow since they stem from issues with organization and communication in these countries' social infrastructures generally as well as their political, economic, and cultural systems. The traits of the network society are discussed below so that they may be contrasted with those of the mass society.

As was mentioned above, the person who is connected by networks has evolved into the fundamental unit of the network society in the modern process of individualization. Communities, extended families, and big bureaucracies, which were formerly dominant local collectivities, are disintegrating. The simultaneous scale expansion and scale decrease are to blame. In addition to continuing to live and work in their own families, neighborhoods, and organizations, these individuals also regularly move about in expansive social networks that are far more dispersed than the old ones. While the span of the labor division, interpersonal interactions, and mass media expands, daily life and working surroundings become smaller and more varied. As a result, as compared to mass society, the size of the network society is both increased and decreased. The network society's reach might be described as both global and

local, or glocal. Its component parts are no longer arranged according to certain times and locations. These coordinates of existence may be transcended with the use of information and communication technology in order to establish virtual times and places and to concurrently act, perceive, and think in both global and local contexts.

The network society's social structures are spread and broken apart. This indicates that, in comparison to conventional families, neighborhoods, communities, and organizations in the mass society, the density of contacts and relationships inside these units is relatively low. The components of these groups, the individuals, instead, choose their own connections and affiliations outside of these groupings. They achieve a very high degree of connectedness between each other as people and, therefore, between the components of the network society to which they belong via all forms of communications.Networks are referred to be heterarchical social systems since they are mostly horizontal and flat. This does not imply that they lack centers, however. Consider the spider caught in a web. Networks often lack a central hub. Since some nodes are more significant than others, they are polycentric. Because of this, the network society has fewer singular centers for the economics, politics, governance, culture, and communal life. They are replaced by several centers that cooperate and compete with one another.

Compared to mass society, the network society is less inclusive. By birth or ascription, you could belong to a certain segment of the mass society. In today's networked, individualized culture, you must compete for a certain position. For each network, you must demonstrate your worth. If not, the network will isolate you or possibly exclude you. In the network society, you must maintain your independence. People close to you don't take you along in solidarity very readily.Face-to-face contact is still, in many respects, the most significant kind of communication in the network society. However, over time, mediated communication also partially replaces and augments it. For this purpose, a variety of mass and interpersonal communication channels are utilized. Narrowcast interactive media that only reaches certain audiences supports and partially replaces broadcast mass media that reaches everyone. They give rise to a variety of brand-new interpersonal and mass communication groupings and forms, including chat and instant messaging groups, virtual teams at work, and virtual communities of interest. With their tiny and diversely populated homes, virtual communities complement the network society's shrinking physical communities[4][6].

DISCUSSION

Changing Relations In the Network Society

The emergence of a new social organization indicates that the dynamics between its constituent pieces are shifting. Both real and chapter links between people, communities, and organizations are modified in the network society. I now enumerate 10 perceivable trends as changes in these relations by using a summary of a significant portion of the argument in the following sentences. I see that they are supported by both media networks and social networks and that they have both technical and social reasons.These developments often contradict widely held beliefs about social and media networks. For instance, a common belief is that networks constitute a 'flat' manner of organization rather than a hierarchical one. The majority of the time, flexible and

horizontal networks are in opposition to heavy and vertical organizational columns. Even some claim that networks are naturally democratic. Another possibility is that they believe they are more transparent than the institutions they help to replace. Another widely held belief is that networks, as opposed to established, closed organizations with memberships, are open and available to everybody. A less uplifting prevalent perception is that contemporary civilizations' social cohesion is being destroyed by networks.

They bypass all pre-existing institutions, and everyone seems to interact with one another inside their own sub-cultural network. Another widely held belief is that because computer networks are no longer constrained by space, time, or the physical world, they provide us greater freedom. This book makes the case that these widely held opinions are, to put it mildly, biased. In comparison to other organizational and communication structures, networks are not always more flat, democratic, open, free, accessible, physically unrestricted, or less socially coherent.First and foremost, relationships themselves are becoming increasingly significant in the network society at the cost of the parts or units they connect. I refer to this relationship as expressed. In every component of society, relationships rise to the top. They are made possible by combining social media and media networks. Their impact profoundly alters the economy, politics, administration, culture, and way of life.

We shall learn in chapter four how a network economy, often referred to as a new economy, is developed. In this economy, the network ties between producers are characterized by a mix of cooperation and competition. This might profoundly alter the market as the main economic channel. Anyway, the relationship between supply and demand is changing as a result of economic networks. It will be clear that institutional politics and public administrations transfer power to other units that are in direct contact with one another through networks, including transnational corporations, international organizations, nongovernmental organizations, local corporations, individual citizens, and their social and political organizations. Bypassing the conventional political epicenter of the national state is possible in this fashion. In response to this change in the balance of power, the state itself evolves into a network state that links ever more autonomous and privatized governmental entities. In 6, we will learn that networks undercut our present legal framework, which is built on the idea of separate persons, actions, and property objects. In chapter 7, it will be shown that, as a result of network individualization, we increasingly choose and create our own social ties. The social environment is gradually imposing less and fewer of these ties. Our existing reality of distinct inventions and media practices will be fundamentally transformed by the advent of a digital culture of hyper-linked creations in year 8.

Another tendency is that, although being articulated, all social ties in the network society are still firmly linked to the physical environments and the units that make them up. This is what I mean by the significant connection. The tendency is toward more conflict between the development of networks and the traits of settings and units that are generally stable and bound to certain locations, periods of time, and physical conditions. We will often see inconsistencies between the characteristics of networkslike their global scope and flexibilityand the characteristics of the persons of flesh and blood they are connectingthose wretched animals that are confined to the biological requirements of their bodies and the boundaries of mobility. It is crucial to keep in mind my idea of networks as forms and substances connecting units or components with certain

properties in order to fully comprehend this book. The formal characteristics of networks, which are the amount and quality of ties and media linkages, tend to exclude these characteristics and the content of interactions, such as the norms and resources involved in communicative activity, according to the classic network approach.

People, groups, and organizations are becoming directly connected in the network society, even across great distances. According to Milgram's estimation from the 1960s, the ordinary American is just six intermediate steps away from another American. The six degrees of separation are assumed to apply globally. see Watts. This number may have decreased in the interim for a variety of causes. First, communication and mobility have significantly improved since the 1960s, spanning both long and short distances. Second, as more and more mailing lists and mass media are being utilized to concurrently contact individuals, intermediate procedures may be skipped. Third, the number of direct relationships has increased significantly as a result of the usage of the telephone and the Internet. The connections they provide are becoming shorter and shorter. Albert et al. noted that in 1999, it seemed like there were only 19 clicks across websites on average. The number of linkages and degrees of separation do not grow as quickly as the number of sites, which is increasing at an exponential rate. Sites and their pages are grouped together, much like individuals.

In the network society, connectedness is increasing for both technological and social reasons. The scale expansion of social relationships in contemporary society, with an increase in both weak and strong bonds over vast distances, is the sociological cause. The development of transportation, the expansion of the quantity and scope of mass media, and the skyrocketing usage of telephone and email are all examples of technical factors. The fundamental result of these closer ties is the development of a linked world that may theoretically become more unified, ordered, and cohesive.The fourth tendency of the network society is that social and media networks increasingly combine to materialize relationships. It was widely believed fifteen years ago that gatherings will be replaced by online activities. Back then, the electronic hamlet represented the future of social interaction. Later, it was determined that face-to-face and offline contact are enhanced by internet communication. There is a growing consensus today that the two forms of communication shouldn't be kept apart and will increasingly be mixed. S. 79 will demonstrate that social and media networks that are connected and constantly switching face-to-face and mediated contact are the way of the future. This will most likely be realized in mobile settings much more so than in electronic houses and places of employment, education, or pleasure[7][9].

A highly robust new social infrastructure will be produced by the fusion of social and media networks. I thus have less concern than most observers about the fragmentation of its public sphere caused by an increase in the number of subcultures that use the new media to interact in total isolation from one another. In 8, it will be claimed that the public sphere will change into a mosaic of spheres that partially overlap and maintain commonalities.It carries some danger to utilize the media for social interaction, communication, and information. Each media has its own weight and possesses unique qualities, such communication capabilities. Social and media networks work together to transform the media into social settings. Additionally, they are becoming into significant institutions of society with separate interests. Mass media, including

the Internet, are increasingly talking about themselves, debating their own place in society, talking about their own shows or stars, and exchanging information amongst themselves. This indicates that the communication relationships they realize and promote have a propensity to become self-referential.

The media of the network society are becoming more biased when it comes to the opinions and interests they share. The media were meant to be 'above' society in the mass society, disseminating information impartially and autonomously. Mass and interactive media are more deeply ingrained in society in the network society. They struggle to maintain a certain independence and quality. However, as will be stated in 8, quality and objectivity continue to be significant performance criteria of information provision in the network society in forms tailored to the demands of their consumers and stakeholders.By fusing social and media networks with multilateral communication, social ties become more dynamic in the network society. The media and organizations of the network society tend to be more interactive and decentralized than the'mass society' with its one-way media and centralized institutions. A series of actions and reactions make up interaction. The development of interacting relationships presumably has the most effects on the social structures of the present and the future. One can see a transition from the supply-side to the demand-side, from manufacturer to consumer, and from designer to user, in all areas of society.

Exclusive and Selective Relationships

There is no denying this change. Many commentators, however, who anticipate a total upheaval of social connections, overstate this as well. In actuality, interaction refers to the interaction between supply and demand. Users often make choices from preprogrammed menus. suppliers continue to handle selection, design, and manufacturing. However, their decision impacts the subsequent supply, and they could even end up being providers. Businesses, governments, and people are increasingly switching between producing products, services, or policies, and acting as their customers or executors.The convergence of centralization and decentralization in networks as a concept of organization is the key factor in this development. The relationships in the network society are better arranged in this manner. The secret of networks will be exposed in this book to be a very clever balancing act between openness and closedness, scale expansion and scale reduction, and decentralization and centralization of organization.

More complexity may be reduced via the use of networks as an organizational and media form than through the use of conventional centralist or mass media forms. As a result, traditional forms of centralized coordination and bureaucratic structure are vanishing. Organizational control per se does not go away, however. In Chapter 5, it will be claimed that modern ICT-based infocracy has largely superseded conventional bureaucracy. We shall see that networks combine vertical activity regulation with horizontal activity coordination.The complexity, ambiguity, and fragility of social and media networks are increasing, and as a result, more and more control and access codes are being encoded into them. ICT networks in particular need a variety of programming, codes, and access restrictions to stop improper usage. This indicates that in reality, every relationship in the network society is becoming more and more coded and programmed. The common perception of networks as informal forms of communication and decision-making is completely at odds with this. We shall see in this book that every code

employed is under dispute and that none of them is regarded as impartial. Powerful tools are codes. They are defining, among other things, the possibilities for individual autonomy and privacy, ideals that will get a lot of emphasis in s 4 through 6.

The employment of codes makes networks more selective in their operations, both internally and externally, among other things. Although they are acceptable in theory to link everyone and to promote knowledge and communication, they often result in increased inequality in companies and in our current society. This is the pattern of more exclusive and picky relationships in the network society.Inequality has always existed in social networks. They take on a new level of inequity when media networks are included. In terms of physical access, possession of digital abilities, and practical utilization, the technology is distributed unevenly. This is especially true of ICTs that are pricey, complex, and multifunctional. As will be shown in 7, in the worst-case scenario, these digital differences may potentially develop into structural inequalities. Differences in people's social and media positions become permanent due to structural inequality, which also greatly influences whether such positions have any impact on choices in a variety of societal domains.

The rising unpredictability of maintaining relationships is the third trend to be discussed here. The unpredictability of the network society will be emphasized in chapter 7. Due to its rapid change, this society is characterized by hypes, cascades of public sentiment and opinion, and other abrupt crises. Additionally, social relationships become technically and socially psychologically fragile when media networks are used. For social and media networks, building trust, commitment, and adequately information-rich communication is both a must and a challenge. ICT network systems are especially susceptible, as will be discussed in 5. Our danger societies and organizations' core operations are in jeopardy because we have become wholly reliant on new technology and are unable to simply roll back the previous ones.The utilization of communication networks depends not only on the technology but also on commonly seen social and psychological factors including commitment, trust, and the depth of the information conveyed. The absence of these traits also makes network communication unsafe and may cause it to malfunction. They must be accessible at a certain minimal level. This conclusion is supported by a long heritage of CMC research conducted in the 1980s and 1990s, which is covered in sections 7 through 9.

Unstable Relationships

The foundation of modern society is made up of a mix of social and media networks. This clarifies how technology contributes to this infrastructure. What technological features distinguish the media networks that underpin this infrastructure? Recognizing that some technical aspects of instruments make it possible to utilize them as tools does not constitute an instance of technological determinism. I explain these characteristics in this article in a manner that readers with no prior technical expertise or experience may grasp them. Understanding the social features of the network society covered in this book requires this explanation.Telecommunication, data communication, and mass communication networks enable technology's contribution to the network society. What percentage of the overall infrastructure does each of these networks possess? Maybe one of them has the upper hand. It is obvious that

they are combining in a process known as convergence. The creation of integrated networks like the Internet.

The important concept in this is convergence. But how ought one to interpret it? Will convergence ever be finished? Will our houses have a single connection for Internet, phone, and broadcasting? Will a single cell phone support all mobile applications for the new media? Or will we still be required to buy a number of con- nections and a variety of media in order to get all we require? The next concern is whether convergence will go beyond a simple technological integration that enables the use of a single infrastructure for all functions. Will use be included as well? Will we, for instance, send emails to our interactive television channel in response to shows? Will we use our multimedia mobile phone to watch television? Will we make phone calls via the Internet? Will we sometimes take advantage of the extra chances or will we continue to use our regular channels just for their intended purpose?At the conclusion of this, the last of these questions is addressed. However, as mentioned in 1, the begins with the technological underpinnings of the network society's infrastructure and the second communications revolution. These include innovations like the micro-electronics revolution, the total digitization of all communications, and the establishment of new cable and air links.

Following that are distinct descriptions of the development of mass communication networks, data communication networks, and telecommunication networks. The progressive introduction of, for instance, text and pictures in telephone, sound and video in data networks, and voice or text answers in broadcasting, is the overarching theme in each of their descriptions. The next section is devoted to this evolution's natural next development: the emergence of integrated or multimedia networks like the public Internet and private broadband channels.The last one offers prospective views of the future. Several current technological trends, including the development of broadband and wireless connections, as well as the blending of information and communication technology with other 21st-century technologies, are extended to an image of a completely integrated and all-encompassing network society infrastructure.

Foundations of the Network Society in Technique

Six revolutionary changes that took place in the latter half of the 20th and early part of the 21st centuries all contributed to the preparation of the technological foundations for the network society and the second communications revolution. The earliest and most significant development was a succession of microelectronics revolutions. In 35 years, it produced five computer generations. Parts miniaturization was the key attribute of this series. The integrated semiconductor, a chip with hundreds of thousands of connections on a plate with a surface area of just a few square millimeters, was the most significant development. Microprocessors were created using these chips for a variety of functions, including operating systems, synthetic memory, and operations related to these. Chips' storage capacity grew exponentially, doubling on average every 18 months. Chips made it possible for the whole telephone networkfrom the main exchange to local switches and terminal equipmentto be computerized. They also significantly decentralized computer processing at the same time, making data transmission a significant phenomena. Chips and processors were eventually employed extensively in audiovisual equipment for transmission and receiving.

Thus, the groundwork for a unified micro-electronic technology for mass, data, and telecommunications communications was built. It serves as the foundation for enhancing the new media's communication capabilities in terms of speed, storage capacity, accuracy, stimulation richness, and operational complexity.The first and second pillars are inseparably connected. For all signals transferred between its parts, microelectronics use a standardized language. The language of digital signals is this consistency. All new media networks in tele-, data-, and mass communications are connected through digitalization. Natural analogue signals have been utilized for sound and picture transmission in telecommunications and mass media from the beginning. These signals are transformed into electrical signals before transmission. They are changed back into analog signals at the other end. Analog signals are realistic, yet they are also susceptible to errors and misunderstandings. Switching proceeds slowly as a result, and transmission produces some interference.

All signals are divided into tiny units called bits that only contain ones and zeros as a result of digitalization. These bits can be quickly and interference-free joined with the help of micro-electronics. The optimum outcome is obtained when digital signals are used across the whole connection, from transmitter to receiver. Data can be processed quickly, messages may be formatted for word processing, and the quality of audio and pictures improves. Though not the main factor for the rapid digitization of all mediated interactions, this technological advantage certainly plays a role. Instead, there is a need to integrate the rapidly expanding completely digital data communications into the overall communications infrastructure. The major impetus for digitalizing the remaining infrastructure was caused by severe issues with data transmission while sending data through analogue telephone lines and modems, which had a finite capacity. With digitalization, computer technology and data transmission take over as the key components of all communication infrastructures.

Digitalization promotes the new media's variety of stimuli, accuracy, and selectivity in communication. Its consistent language improves content accuracy by reducing errors and duplication while increasing options for precise processing and computation. Choosing sources, contents, and destinations is made easier since they are all framed and put together in the same language. Finally, to boost the stimulus richness of the new media, all data kinds might be added to the same multimedia source.The store and forward principle, which is implemented in digital micro-electronic machinery, is the following technological cornerstone of the network society. This refers to the usage of digital memory and data storage in all kinds of databases. Traditionally, it was impossible to store the contents of phone conversations. In central exchanges, telephone operators manually switched the lines. On the cassettes of answering machines, only calls that were made much later may be saved. There was just tape storage for broadcast messages. They were not simultaneously available to senders and recipients. All interactive media is strongly stimulated by the storing of digitalized material in electronic memory and databases that are accessible by software applications.

Producers and users may fill them out and send them to everyone connected to the medium. The addition of the store and forward concept expands communications with a wide range of additional capabilities and serves as the foundation for all email use, Internet page retrieval, computer software use, and interactions with audiovisual multimedia applications. It serves as

the foundation for all interactions with new media, whether online and offline.The accuracy, selectivity, and interactivity of communication are maintained via the store and forward principle. These controllable capabilities are made possible by databases and electronic memory. However, since every activity is recorded and archived, they also pose a potential danger to privacy protection.The layered arrangement of computer and computer network technologies is the fourth technological pillar of the network society. This trait is often overlooked, but it will become clear in this book that it is crucial for freedom of information and communication in the network society as well as for decision-making. Hardware, software, and applications are separated by the layered structure of computers. Because of this difference, computers become multipurpose devices. There are two types of software: operating systems and specialized applications.

In tele-, data-, and mass communications, the usage of software is becoming more and more crucial. It provides a greater level of control over communication patterns. These days, software runs telephone exchanges from start to finish. Data communication networks are also centrally managed and guarded by sophisticated software, often so sophisticated as to morph into new types of technical networks, or value-added networks. Conditional access systems, computerized program guides, and billing systems are used in mass communication to control access to, distribution of, and pricing for programs.Computer networks also have a layered structure. The layer of network infrastructure, the layer of transport and operations, and the layer of application services are the three layers with the fewest number of layers. Computer networks may potentially contain seven levels, according to the typical open systems interconnection paradigm that will be covered in the section that follows.

As decisions may be made at every level, the layered structure of computers and their networks promotes the powers of selectivity and interaction. It gives networked systems the option to concentrate and decentralize information and communication flows. The finest options for managing computers and their networks are provided by it. We'll see that improved chances for privacy protection are provided by the division of labor in network layer processes.The fifth technological pillar is advancements in cable and air links. They also address the capacity of all senders, receivers, switchers, and routers utilized in transit, in addition to the transmission capacity of the employed lines and beams. Network advancements in microelectronics and digitalization won't result in significant improvements until the connections can carry substantial volumes of digital signals. Over the last century, cables' transmission capacity has grown significantly. Coaxial cables, which are constructed of copper wires twisted into a bundle for cable TV, were used in conjunction with the copper wires of telephone. They were gradually supplanted for computer networks by fiber-optic or plastic wires. These are very thin, glass- or plastic-based wires that carry light signals rather than electric impulses. When compared to a six-wire coaxial cable and a regular copper wire, the capacity of fiber-optic cables may rise up to four or five times and many times, respectively. In the meanwhile, the usage of higher frequencies has increased the airborne connection capacity.

High frequencies are used for satellite broadcasting at a great distance and laser or infrared technology reaching small distances in broadband and wireless computer communications. These technologies evolved from low frequencies used for radio and medium frequencies used for

television.The capability of the switchers, receivers, and transmitters, however, is significantly more crucial. They have evolved into computerized technology with better micro-electronic capabilities throughout time. Even copper cables' capacity may be greatly increased because to the integrated software's ability to compress signals to such an extent. The advancements achieved in the optical transmission of satellites and antennas used for broadcasting, telecommunications, and broadband computer traffic are another significant enhancement. All connections might eventually be made up of optical computers, fiber-optic cables, high-frequency air transmission, and satellites that transmit light signals.

Naturally, faster and more widespread air and cable links increase the new media's communication capabilities. across the course of the 20th century, an international network of telecommunications, computer networks, and broadcasting was built by connecting more and more various connections across cable and the air.The fusion of telephony, data communication, and mass communication technologies to produce a single digital communications infrastructure is the last technological base to be invoked. All five of the aforementioned pillars are the underpinnings of this approach. It will direct the description in the following sentences. Convergence significantly affects the network society's infrastructure. We shall have a single communications infrastructure that connects all social activities for the first time in history. There will be many connections between online and offline conversations. More and more of our daily activities, including employment, education, information retrieval, communication, decision-making, cultural expression, entertainment, and others, will be available to us online, offline, or both. Communications will converge to form a physical nervous system for civilization. Now is the moment to describe how it has changed[10], [11].

CONCLUSION

In conclusion, Social, economic, and political dynamics have undergone a major transformation as a result of the shift from a conventional society to a network society. Digital networks have a ubiquitous impact on society, connecting people on a global scale, reshaping economic connections, promoting civic involvement, and presenting both possibilities and difficulties. For negotiating the difficulties of the digital era and using its potential for social advancement and inclusive development, it is essential to understand the traits and consequences of the network society. The network society is not without problems, however. The rising dependence on digital networks has given rise to worries about privacy, electronic monitoring, and online security. Existing socioeconomic disparities have been made even more pronounced by the digital divide, which is defined by uneven access to technology and connection. Furthermore, the network society has seen how false information is disseminated, echo chambers are created, and online platforms are used for sinister ends.

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OVERVIEW OF TELECOMMUNICATION NETWORKS: CONNECTING THE WORLD

Neha Saroj*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-neha.saroj@presidencyuniversity.in

ABSTRACT

Telecommunication networks play a crucial role in facilitating communication and information exchange in today's interconnected world. These networks serve as the backbone for various communication technologies, including voice calls, data transmission, internet access, and multimedia services. This chapter provides an overview of telecommunication networks, highlighting their fundamental components, operation principles, and emerging trends.Telecommunication networks consist of a complex infrastructure that enables the transmission and reception of signals between interconnected devices. Key components of these networks include transmission media, such as copper wires, fiber optics, and wireless channels, along with networking devices like routers, switches, and modems. These elements work together to establish reliable connections and ensure efficient data transfer.

KEYWORDS: *Broadband, Cellular Networks, Data Transmission, Internet Service Provider (ISP), Landline Networks, Mobile Networks.*

INTRODUCTION

This book defines telecommunication as a method of communication that involves sending text and voice across long distances using technological means. The mainstay of the current telecommunications infrastructure is the telephone network. The ancient telegraph and telex networks have been substantially replaced by and absorbed into this network.Circuit switching is the basic foundation of telecommunication. In other words, a constant connection is maintained between those exchanging calls, texts, and data. The connection has to be turned on and off with each new call. Previously, this was carried out manually by operators. Three different kinds of automated telephone exchanges have been developed throughout the last 75 years. Rotary switching created mechanical connections that were eventually replaced by electro-mechanical relays. The third form of automated exchange used completely new methodsnamely, computers and softwareto achieve switching. The whole infrastructure has been digitalized in conjunction with this third stage of switching growth, resulting in increased capacity and faster connectivity.

The evolution of telecommunications began with fixed telephones. This is not to say that no connections across large distances were made utilizing satellites and antennas. It implies that individuals utilized telephone equipment that was permanently installed in certain locations and that enormous amounts of copper lines were hauled through the ground to reach customers over

shorter distances. It has been around a century since the advent of fixed telephony. It offered improved capabilities and reasonably safe connections. It was, however, rather pricey. Telephone companies generated enormous investments and earnings while enjoying a near-century-long monopoly in their respective nations.Mobile telephony has increasingly taken the role of landline telephone since the 1980s. Mobile telephony is even the first kind of telephone to be installed in undeveloped nations since it needs far less capital. The home cordless phone and the automobile phone were the first to be replaced. Prior to then, radio broadcasts, navigation, and other long-distance communications all employed mobile air telephony. Signals are sent for these communications at a low frequency and are sent in all directions. Broadband and frequency requirements are increased for mobile or cellular communications. Therefore, it is necessary to establish intermediate stations to link cellular telephone cells.

Mobile telephony has already gone through numerous stages in the last 15 to 20 years. The analog cordless cellular phones and vehicle phones served as the foundation for the development. Three generations of digital mobile telephony have emerged during the 1990s. They provide increased quality, security, and a host of additional amenities, which will be covered in the sections that follow. GSM, which originated in Europe, and analogous systems in other nations, such as the United States, make up the first digital generation. More over one billion GSM customers were present globally in 2005. GPRS has been a part of this very popular kind of digital mobile telecommunications since the year 2000. Compared to GSM or other equivalent systems, this so-called second generation kind is five times faster. It is especially suitable for transmitting and receiving data concurrently with or in place of voice. The use of packet switching, which originates from data transmission, is one of the sources of this capability. This sort of switching maintains no ongoing connection between callers. instead, connections are made only when enough room is available to convey address-tagged, brief packets of data. They also include text, photos, and videos in addition to voice. The second generation provides far more affordable SMS (text messages sent through mobile devices) and MMS (photos and short videos sent via mobile devices) services, as well as Mobile Internet web sites[1][3].

Broadband communication is available with the third generation of digital mobile telephony. This indicates that high-quality streaming video and multimedia Internet apps are accessible on a laptop or mobile device. The most well-known kind is UMTS, which began operating in 2004 in Europe and Japan. For many years prior to the development of this system, telecom operators had invested countless billions of dollars on the acquisition of the extremely high frequency spectrum components. This was a highly hazardous investment since it is still unclear if the system would be a success due to the lack of immediate demand from huge user populations and competition from other wireless technologies derived from data transmission, like WiFi.

The greatest impact on society and communication will likely not even come from these significant advancements in mobile telephony in terms of quantity and type, but rather from a number of other services that fall under the category of digital telephony and are provided with both fixed and mobile digital telephony, such as ISDN and DSL. They were first made available in the US in 1989 thanks to AT&T and the local Bell companies. Automatic call-back repeats the action when a line becomes available after being occupied. With the calling line identification technology, the caller's phone number is shown. Before picking up the phone, the person being

phoned may hear who is calling thanks to distinctive ringing. 'Selective call rejection' allows you to provide a list of phone numbers that should not be called. Then there is customer originated trace to detect unwanted calls, such as profane ones. And last, there are a few places that provide upgraded answering machines. The voice mail system is the most crucial of them. The sender inputs one or more numbers and leaves a message in this kind of spoken mail. The recipient may listen to this message on any phone after inputting the access code.In addition to allowing for the serious introduction of the videophone and video or audio conferencing, initially in fixed telephony, the continued expansion of the telephone network also makes it possible for the transmission of images and videos on mobile devices. In spite of its 1964 introduction, the videophone didn't appear to be in demand. It will be given another opportunity with the advent of photos and movies on mobile devices. With mobile photos and videos, the videophone, and videoconferencing, the phone is linked to both the computer and the audiovisual media in addition to the computer.

DISCUSSION

Data Communication Networks

Data communication is a sort of communication that involves the interchange of text and data in the form of computer language via technological medium. Networks for data communication have evolved from links inside and between huge computer centers to connections between computers that function alone or in small units. In this fashion, networks of all sizesfrom global data networks to domestic information systemswere built.Private, public, or semi-public data networks are used internationally. Internationally active multinational corporations, military, and security groups all employ private networks. They need strong relationships that are safe. Businesses and consumers use the public network of networks known as the Internet to transfer relatively tiny quantities of data, mostly text and pictures. Businesses that transmit massive volumes of numerical data across rental lines on public telephone exchanges build semi-public networks. They need more capacity and specific security. Banks and other financial organizations employ various semi-public international data networks, as do land, sea, and air transportation services. Only businesses engaged in the relevant industries and willing to accept the relevant technological requirements should have access to these networks[4][6].

The similar distinction between public and private data networks may be observed on a national level. Public networks are the exclusive data networks provided by large telephone companies and those used for Internet-based local communication. Airport and harbor networks are considered semi-public networks. Private networks are the internal networks of banks, government agencies, and, generally speaking, intranets.Wide area networks are large-scale nationwide networks. A network that spans at least 10 kilometers is known as a WAN. It has the ability to join many local area networks or stand alone. A LAN is managed by servers and software rather than a central exchange. It is a small-scale network that connects all of the terminals or stations that are a part of it directly, often covering less than 100 meters across distances up to 10 kilometers. LANs emerged as the most significant networks for business and institutional data transmission at the start of the 1990s. Personal computers, network PCs, workstations, and network computers, or any combination of these terminals, make up these networks.

A LAN has a decentralized structure. it is neither a mesh network or a centralized star structure, which contain central exchanges and nodes, respectively. Data may enter and exit the terminals in two different ways. Data move around the network like a ring structure does. The data are copied by the target station and sent back to the sender, who then either deletes them or forwards them to another address. All stations in a bus structure continuously 'listen' to what is being transmitted. The data is only copied by the target station. Thus, it is no longer necessary to remove the data from the network. A bus structure is referred to be a tree structure when it is enlarged by adding more branches to the stem. Here, these network topologies are covered in depth to make it easier to explain later how they will affect the power dynamics of companies that use them.Switching is used in communication to link and convey data, much as in telephony. The switching methods include cell, packet, and circuit switching. Since the capacity of the current lines is insufficient to establish a permanent connection for the transfer of data and text, circuit switching, which has its roots in telecommunications, is often impractical. A number of clever packet-switching strategies have been created as a result. tiny 'parcels' of data are transferred when the connection has enough free space, as was previously said. These tiny 'parcels' of data are assigned address tags. Since most data communication involves bulk transfer or operations that may wait, it is true that most data communication does not need to happen instantly and interactively.

Cell switching is the newest switching method. now than being distributed in packages of variable sizes, data is now conveyed in extremely tiny cells with a 53-byte message and an address. Because the network may be split into continually changing subnetworks, switching is made even more flexible as a result. Asynchronous transfer mode is the most recent cell switching type that may be utilized to build broadband communication. The telephone companies have made an effort to provide a broadband alternative to its main rivals, Internet service providers that use the Internet protocol, with the help of this strategy. This has gained a lot of popularity because of how adaptable and decentralized it is. The telephone companies are attempting to regain the ground they lost to the Internet by introducing ATM. They used these connections, but the Internet became too independent and started to compete, such as by providing Voice over IP, an Internet telephone service. The revenues and earnings of telephone corporations are seriously at risk because of this. For more on the battle taking place behind the scenes between ATM and TCP/IP and the business interests supporting them, see Steinberg.

TCP/IP and ATM are examples of protocols. They function as a tool for standardizing network communications. For networks to support both internal and external communications, the same design principles must be used. The open systems connectivity paradigm is the leading standard. The seven tiers of a network are established by this standard. The hardware and system software that should be utilized to enable communication inside the network are determined by the bottom two tiers. The communication protocols are decided by the following four tiers. The seventh and topmost layer describes the purpose of the whole structure: applications. The issue with these seven common levels is that existing networks fill them up differently. To mention only one issue, many switching methodologies are employed. As a result, there is a greater need for networks in so-called open systems. In an open system, network operators may utilize and connect to all network levels except the application layer, regardless of who built the network.

For the transmission of voice and often for data transfers, a narrowband network is adequate. However, the analogue telephone network's limitations have been soon reached by network users. Only 14 000 to 56 000 bit/s could be reached using modems to transform digital signals to analog ones and back. Both analogue and digital networks' capacity has significantly risen thanks to complex and costly compression methods. To eventually increase capacity, the telephone network must be fully digitalized. No longer do those who are connected need a modem. Beginning with a baseline narrowband capacity of twice 64 000 bit/s and a signaling channel of 16 000 bit/s, ISDN was a digital service. This quickly seemed inadequate for the transfer of massive files. DSL was made available and offers significantly more bandwidth in both ways. With the use of this service, mass, tele, and data communication are combined in multimedia networks. DSL is explained below as a result.The telephone network had to be linked to the computer since there were no alternative infrastructures for data exchange. There is still opportunity for expansion even though this is transitioning totally to digital and has far more capacity than previously. With certain applications that automatically call back, transfer talks and data to another telephone or monitor, and provide the option for callers to briefly pause a conversation and consult someone at another telephone, the computer is able to assist the telephone. When accepting orders over the phone, for example, the keys on a digital phone may be utilized to capture data for computer processing. Long ago, the mechanisms for buying and selling stocks on the stock market were completely computer and telephone linked.

However, the transmission of moving pictures completely revealed the limitations of narrowband communications. The speed requirement for the simplest video pictures is 700 000 bit/s. It is not possible to connect broadband LANs using ISDN or other narrowband telephone infrastructures. DSL, UMTS, new compression methods, and the use of fiber-optic cables in lieu of copper wires were thus required in order to send audiovisuals and multimedia web pages over telephone lines and display them on computers and televisions. Despite using telephone lines, data communication networks are possible to combine the audiovisual and television industries in this manner. They might also provide data broadcasting, often known as datacasting, which involves central exchanges transmitting massive volumes of data to local terminals, such multinational corporations addressing its local departments or enormous databases and television programs[7][9].

Multiple Media Networks

A kind of communication known as mass communication is one that uses media to spread voice, text, and pictures among an audience. Most networks utilized for this purpose up until recently were air links. It goes without saying, although it is not necessary, that radio broadcasting employs radio transmission in the 'ether'. However, compared to regular radio, FM radio and television need a wider range of frequencies. In Western nations with dense populations, cable networks for broadcasting have been built since the 1960s. They provided a fix for the 'ether's' issue with limited frequencies. Governments have historically maintained strict control over broadcasting because of this shortage.Nevertheless, despite the deregulation of broadcasting, the possibility of direct broadcasting via potent satellites and small dish antennas, and the inadequate infrastructure in big, poor, and sparsely populated countries, connections by satellite and antenna have paradoxically come back into fashion as the primary global transmission media. For mobile

telephony, data, and mass communication, a significant number of regional and international atmospheric networks have been built. Some of them make use of satellites in geostationary orbits that are substantially lower than usual.

Distribution networks continue to dominate mass communication networks. These networks have a tree-like organizational structure. Until they reach the recipient, sounds, pictures, and text are transmitted by a broadcasting corporation via carriers with ever smaller branches. These centralized broadcasting networks, nevertheless, are at their capacity. This is shown in the following five developments. Initially, broadcasting required ever-increasing capacity. The approximately 30 channels of capacity provided by coaxial cable in the 1990s proved to be inadequate. Fiberglass cables and compression methods were used to remedy the issue. These cables are no longer only distribution networks since they are also utilized to transmit Internet and telephone. Second, parallel information flows, like tele-text, were increasingly present when television programming was distributed. As the necessity for two-way communication grew, there was a change from allocution to consultation.The third trend resulted from two-way communication. Pay TV and subscription TV showed a significant benefit over conventional one-way distribution. Cable TV hookups with two-way communication also allowed viewers to comment on shows. Interactive television was thus created. According to Jensen and Toscan, this is two-way TV where the viewer may choose the programme and provide user feedback. Van Dijk et al. make a distinction between hybrid, Internet, and set-top box ITV. The Internet or a phone call are integrated with a television channel in this scenario as distinct return channels.

Digital radio and television come before ITV. This indicates that digital radio and television channels and programs are available. Compared to analog radio or TV, this offers a wider variety of channels and programs, but it does not allow for program modifications or responses. A fourth trend, the progressive digitization of all audiovisual mass media, includes digital radio and TV. The next phases include fully digitalizing all terminal equipment, including televisions, video recorders, and television cameras, utilizing, for example, high-definition television. This entails the production of very high-resolution pictures and high-quality digital audio.The growth of local, corporate, and personal radio, television, and websites is the sixth trend decentralizing broadcasting. These organizational and personal media are upending the conventional, centralized, national system of mass communication delivery. Corporate TV, text- and data-based intranets or extranets, and multimedia websites with streaming video created by enterprises, governmental organizations, communities, and people themselves have often developed into real applications. Web gaming is the transfer of computer gaming with high-quality audio and video to the Internet. In the audiovisual realm, videoconferencing has developed into a form of communication both inside and between enterprises. Messages of mass communication may be sent in this fashion as well, but only among tiny masses at most.The mass communication networks for television and other audiovisual media have shifted to the world of computer and phone networks as a result.

Composite Networks

The preceding sentences discussed how mass, tele, and data communication networks converged. Integrated networks were developed as a result of this procedure. These networks serve the purposes of each of these three forms of communication on their own. Because they are

integrated from the bottom upfrom infrastructure to transport and management to servicesthey are able to do this. They are made to provide integrated services, in other words. The majority of the extensions mentioned before were unplanned expansions of capabilities and services. At all levels, integrated networks have been developed.The macro-networks, like the Internet and ISDN, stand out the most. In the 1980s, it became clear in telecoms that telephony could not interchange the massive increase in digital computer traffic using solely analogue modems. The Integrated Services Digital Network provided integrated services such as enhanced file transmission, digital telephone, and reasonably quick Internet access. When ISDN was launched, its baseline narrowband capacity was 64 000 bit/s in each direction, with a 16 000 bit/s signaling channel. The first fully developed combination of telephony and data networks is ISDN.

The Internet combines mass communication with data transmission. It started off as a simple extension of data transmission, consisting of many pages of text that could be disseminated as either public or private message exchanges. The mass communicative nature of the Internet became increasingly apparent when the World Wide Web was launched in 1991 thanks to a rise in the number of websites with graphical user interfaces. The ability to upload files and send email attachments has also increased thanks to the Internet.Satellite and cable TV led to the development of the third macro-network providing integrated services. The capacity of digital satellites increased to the point that consumers could now concurrently access hundreds of radio and television channels, and extended data-casting of enormous computer data and video program files for global enterprises became a possibility. Set-top boxes, which are technically computers, were installed on televisions in homes to combine conventional one-way cable transmission with interactive channel and program selection capabilities.

The first organizations to deploy integrated networks to enhance internal data communications were Western businesses. In order to integrate corporate telephony into data communications, video services, and archiving, LANs and other local systems had already been implemented by the 1980s. The corporate telephone installations and computer systems were the first pieces of equipment to be linked or integrated. The local network's capacity was subsequently extended to carry moving visuals in addition to static images and graphics. As a result, a LAN might be linked to a service for document archiving, a system for video surveillance, a closed video circuit, and files for interactive video courses.Since 1996, so-called intranets have been established in business and governmental computer systems. Intranets are exclusive extensions of the general Internet. They are particularly well suited for the transfer of text and graphics inside an organization and utilize the same protocols and browsers. Extranets are produced when these intranets are connected to the intranets of other businesses. The staff of the partner firms may use them as resources.

Intranets and extranets are often not the foundation of ICTs inside enterprises, nevertheless. This includes the more robust central administration systems and databases, which are significantly more secured. Enterprise resource planning, document information systems, and workflow management systems are used to execute organizational tasks, while executive information systems, management information systems, and decision support systems are used to manage these tasks. These systems and databases are connected in LANs. These systems continue to be of far greater importance to large enterprises' operations than Internet technology. The idea that

all of an organization's internal and external information and communication infrastructures will embrace Internet technology during the years of the Internet boom is far from reality. The proprietary, private systems on the above list are still significantly more powerful and secure than the open Internet infrastructure.

Standalone computers used at home or in the office make up the smallest integrated networks. They are evolving into home automation systems, often known as smart homes or intelligent homes. For this interconnected network, futuristic ideas were created decades ago, but customers did not express much interest. House systems will likely be added to our houses gradually and in groups, as is to be anticipated. Equipment for computers and audiovisual systems makes up the first cluster. The second will likely be the control of the home's power supply in general and the management of the water supply, kitchen appliances, and central heating systems in particular. The third cluster might include security tools like burglar alarms and specialized equipment for the ill, old, and crippled. These clusters will be connected to macro-networks and the outside world by telephone, cable, and satellite. However, it will be some time before all of the microprocessor-controlled appliances in our houses are linked to a large-scale network and can be managed and watched from a single panel within a home[10].

CONCLUSION

In conclusion, Modern communication systems are built on telecommunication networks, which allow for smooth connection and data transfer. These networks are always evolving to satisfy the escalating demands of a digital society as a result of continual technological breakthroughs and the evolution of user expectations. Researchers, practitioners, and policymakers who want to shape the future of communication and information sharing must comprehend the components, operating theories, and developing trends in telecommunication networks. With the ability to control network infrastructure in a flexible and scalable manner, network virtualization and software-defined networking (SDN) are becoming more popular. Additionally, the use of edge computing and cloud services moves computation closer to the edge of the network, lowering latency and boosting real-time data processing capabilities.

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MULTIMEDIA AND BROADBAND NETWORKS: HIGH SPEED COMMUNICATION

Padmavathi S*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- padmavathi.s@presidencyuniversity.in

ABSTRACT:

Multimedia and broadband networks have revolutionized the way information is accessed, shared, and consumed in contemporary society. This chapter explores the significance of multimedia content and the role of broadband networks in facilitating its seamless distribution. It highlights the impact of these technologies on various aspects of society, including communication, entertainment, education, and commerce.Multimedia refers to the integration of different forms of media, such as text, audio, images, and video, into a cohesive and interactive experience. With the advent of broadband networks, the transmission and delivery of multimedia content have become faster and more efficient, enabling seamless streaming, downloading, and sharing of high-quality media. This has transformed the way individuals engage with information and entertainment, providing immersive experiences across various platforms and devices.

KEYWORDS: *Bandwidth, Content Delivery, Digital Media, High-Speed Internet, Interactive Media, Multimedia Applications, Quality Of Service (Qos).*

INTRODUCTION

Multimedia and multimedia or broadband networks were created in response to the growing need for capacity and integration that was evident in all of the independent and integrated networks mentioned above. This book defines multimedia as offline hardware and software. Their online connections are referred to as broadband networks or multimedia networks. Text, numeric data, sound, and video may all be created, processed, and sent concurrently thanks to multimedia and the networks that support it.Multimedia is the linking of many interactive media or interactive devices into a single interactive medium. Applications that combine music, text, data, and graphics may be incorporated into a single device or a group of related devices. The integration of many sorts of data and a high level of interactivity made possible by the user's relative high degree of control over the interaction are the fundamental features of multimedia. Three more aspects of the utilization of multimedia are readily apparent in the last feature[1][3].

The stratification of information is the first. More details regarding a fact may be found by users in the form of explanations, s, pictures, images, videos, animations, sounds, and so on. The same information may thus be presented in several ways. The second trait is modularity: a database of information is made up of parts that may be obtained independently and put together whatever

the user desires. The capacity to cut and paste bits of digital information is the last attribute of multimodal information manipulation.I first provide a brief overview of the various categories of standalone multimedia equipment in the sentences that follow. These include multimedia desktop PCs, multimedia DVDs, multimedia laptops and other portable devices, and virtual reality, the pinnacle of all multi-media. Next, I talk about broadband networks.The multimedia PC achieved consumer market success in 1995. Nowadays, multimedia computers are marketed almost everywhere. More affordable and potent microchips, increased miniaturization of audio and video interfaces, and integrated CD or DVD players all contribute to this becoming achievable. The multi-media PC has become particularly captivating for the general public because to the built-in player, which was first primarily utilized for amusement and education. From 1995 to 2005, ever-more sophisticated capabilities were added, such as the ability to edit video and audio recordings, attach a microphone for making calls over the Internet, or connect a webcam for transmitting moving photos.

The multimedia CD and DVD, in all of its forms, are expected to take the lead as the most popular method of storing and reproducing multimedia for the general public. They are being utilized in more and more computers and audio-visual devices. This technique is mostly based on disc and laser technologies rather than microelectronics. The independence and adaptability of these CDs and DVDs, their relative affordability, and their appropriateness for a vast audience are only a few of their benefits. There are, however, three significant drawbacks. First off, despite the rapid capacity growth of succeeding CD and DVD generations, processing and storage capacity is still rather constrained. One must access massive datasets online if they are to be consulted. Access to latest information is no different. This might be accomplished online. CD and DVD players are increasingly being connected to the Internet in order to add the most recent information. In reality, this is how a multimedia network is built. The inability of standalone multimedia to facilitate conversation with others, including the asking and answering of questions, is a third drawback.

Multimedia laptops should have the same features and storage options as multimedia desktops and drives. Only a few essential applications and minimal capabilities are required in small portable digital devices, such as personal digital assistants, palmtop or handheld computers, and personal communicators, or whatever they are called. The most popular programs include an electronic agenda, email, phone and SMS, basic word processing and math, and online access. In a sense, these gadgets are multimedia that can be utilized both online and offline. They come in every sort and size you can think of. Applications and capabilities simply rely on the screen size, other components, and weight you choose. These days, a single multimedia device might be anything from a bulky multimedia PC to a small cell phone with video capabilities.Virtual reality media is on the opposite extreme of the spectrum. This is the pinnacle of multimedia since it necessitates the interconnection of several powerful computers in order to actualize the most cutting-edge applications. The creation of three-dimensional artificial worlds using virtual reality media allows users to engage with this simulated and pre-programmed environment while seeing and experiencing it with a variety of senses. In order to do this, the human body is surrounded by a variety of input- and output-media, allowing a person to see, hear, feel, and move all at once. This all-encompassing and intellectually engrossing technology is utilized in gaming, animation, design, and training.

The development of multimedia has advanced far more quickly than the networks' ability to transport multimedia data, programs, and goods has grown. The analogue and early digital telephone modems might take hours to transmit a file. The World Wide Web's burgeoning visuals caused downloads and computer processing to become overloaded. Significant multimedia material had to be transferred through CD-ROM and DVD for around 10 years. Broadband networks proven to be the only viable option for networks following the adoption of complex compression methods. In reality, the minimal need for broadband is a capacity of 2 Mb/s in both directions. To transmit high-quality moving photos, this is necessary. However, the International Telecommunication Union and the majority of telecom carriers referred to 256 Kb/s in two directions as broadband in 2003. Anyhow, in 2005, DSL on phone lines, Internet on cable and satellite, UMTS on mobile phones, and Digital Video Broadcasting for television via cable and satellite all provided so-called broadband connections.

Large capacity was needed for LANs and WANs inside of enterprises, where the broadband development began. Broadband, on the other hand, started to show up in the consumer market after the year 2000. Consumers with internet connections benefit more from new media options than other consumers do. The diversity of computer and Internet applications as well as their actual use, length of use, and extent have all significantly increased. Naturally, more bandwidth ranks as broadband's second most crucial attribute. This not only reduces wait times during operations but also makes it possible for many new applications that need video feeds. Telework, telestudy, telegames, the usage of the videophone, and videoconferencing are all developing into viable alternatives to their offline equivalents for the first time in history[4][6].

DISCUSSION

Embedded Technology

The picture of a completely integrated and all-encompassing technological infra-structure of the network society comes as a result of extending the developments in tele-, data-, and mass communication addressed in this. This infrastructure is being created by a number of the previously mentioned future developments. The trend toward greater downsizing of information and communication technologies is the first, and unquestionably most significant. Moore's Law, which states that chip memory and processing capacity double every 18 months, was first published by Gordon Moore in 1965. This 'law' is still in effect and will do so for some time to come. When the tiniest amount of physical material used to make chips can no longer support electrical currents, the optical computer may then start to operate, using tiny light beams in place of electricity. The incorporation of nanotechnology, the study of creating gadgets at the molecular and atomic level, is an additional possibility. As a result, practically anythingfrom things to human bodies and brainswould eventually be equipped with the tiniest chips, computers, and communication devices you can conceive. Maybe even human cells will be connected to the microchip. ICT will be connected with the other two major 21st-century technologiesbiotechnology and nanotechnologyin this manner.

Miniaturization in the context of networking refers to the shrinking size of the possible components or units to be joined. Both social networks and media networks fall under this. In this book, it is claimed that telephone and computer networks facilitate the social scale reduction

process known as network individualization. The new media will be widely accessible after it has been shrunk. The main idea of this book is that social and media networks will be completely intertwined, creating a network society.

So-called embedded technology is made possible through miniaturization. Currently, chips are found in a growing range of different gadgets and physical items, including watches, vehicles, homes, and clothes, in addition to computers and electronic communication devices. The most well-known instance is the refrigerator that alerts the grocery store that the milk is nearly gone and requests a fresh supply. The integrated circuits can function as CPUs but they can also send signals to other devices in a compact form factor. The outcome is referred to as ubiquitous computing. In the future, information processing and transmission technologies will be used practically everywhere by both humans and the physical things they own. This is referred to generally as information appliances. Donald Norman proposes that information appliances act as invisible computers.

Embedded technology significantly expands the scope of online collaboration. More and more, devices that can exchange signals without human intervention are linked alongside humans. We also link people and things when human interaction takes place. By doing this, we build a comprehensive network architecture.The third trend is the shift away from ICT, which is reliant on stationary objects or locations and relies on wires for transmission, and toward a technology that is employed when we become mobile and relies on air beams for transmission. Following cable's dominance in many industrialized cultures, atmospheric networks have made a comeback in public communication. Cellular telephony is partially replacing fixed telephony in the telecommunications industry. in developing nations, large-scale telephone delivery even begins in wireless forms. Finally, computer cables are progressively being replaced by wireless connections in data transmission, initially in local home or office settings, then in mobile and broad area space.

We have learned from this that wide-area wireless communication is constrained. First, compared to wireless connections, broadband cable still has a far higher theoretical capacity. A second restriction is the lack of airborne frequencies, and a third is the challenge of separating the growing number of atmospheric connections. Therefore, the combination that is most likely to occur is the linkage of long-distance cable with wireless communication access points in neighborhoods, businesses, and public spaces.The significant increase and extension of networking that has resulted from the emergence of mobile and wireless communication is significant. The broadening of the geographical scope comes first. All regions of poor countries and rural locations in rich nations have very simple and affordable access to satellite broadcasting, telecommunications, and the Internet. The second is the expansion of usage outside the home and office to include travel and leisure. In all of these settings, cables and fixed access points will no longer restrict how much space users have to move about and utilize technology. As a result, networking will grow in both scope and size dramatically. This is significant because connection increases at a certain time. When a critical mass of around one-third of prospective consumers is achieved, this will occur. The utility of a network matches the square of the number of users, in accordance with Metcalfe's Law.

The network society will reach the farthest reaches and deepest crevasses of the globe thanks to mobile and wireless technology[7][9].The development of broadband connections is the last trend that lays the technological groundwork for a fully evolved network society. Ten years later, via broadband connections via cable and the air, the multimedia PC capabilities and applications made available in the 1990s are being expanded. Even George Guilder argues that bandwidth increases at least three times as quickly as computer power in his so-called Guilder's Law. Accordingly, if computer power doubles every 18 months, then communications power doubles every 6 months.

Internet Technology

Whether or not this is the case, broadband significantly affects how often computers and their networks are used. According to polls by the Pew Internet & American Life Project and the UCLA Internet Report, new use patterns and a new way of life are emerging. The usage of computers and the Internet is gradually becoming a part of daily life. People are no longer concerned about connection time costs because to the 'always on' aspect of broadband. As a consequence, the link is utilized to educate and communicate on even the smallest occasions. There is now a broadband elite that use this connection daily for at least 10 distinct apps. Average people are increasingly online throughout the day, not only the privileged. Additionally, they employ more generic network apps as well as applications that take the place of offline activities and specific surroundings. Broadband will thereby increase the size and reach of societal networking.

The growth, establishment, and usage of networks for transportation and communication have always been primarily driven by the economy. Here isThe book begins with a section on the economic implications of networks, which is why. It begins by discussing the significance of networks for the contemporary economy. What modifications do they make? Are these adjustments only formal and organizational, or are the relationships between production, distribution, and consumption being significantly altered? A new economy, according to some, has emerged.The following section looks for an explanation for the modern economy's sharply increasing need for all forms of communication. It was suggested in 1 that a second communication revolution is now taking place. What led to this revolt, and why? What answers do the new media provide for the present communication issues facing the economy?

The emergence of the network economy is the subject of the third. Every economic activity seems to be accelerating. In the era of globalization, place doesn't seem to matter as much anymore. The overcrowding and bureaucracy of conventional business and government give rise to a particular sort of flow economy. What structure underlies this flow economy? Does this mean that network organizations, which are flat and differentiated on a horizontal plane, are replacing hierarchical, vertically connected corporations? Who is in charge of these networks of businesses? Some of these groups evolve into what are known as virtual groups. Since they only function online, they are meant to be free of temporal, geographic, and physical limitations. Can such a group continue to exist?

The old markets and hierarchies are seen to be outdated forms of economic structure, whereas networks constitute a newer kind. The fourth section discusses this new form's qualities. Future

economies may be affected significantly if it turns out to be a workable structure for the economy. It could widen the area of coexisting mixed economies between the hierarchically controlled economy on the one hand and the free market economy on the other.The odds of the so-called new economy, which surfaced as a potential in the 1990s, are not comparable to this possibility. In the sixth, the assertions of this viewpoint are explored. Are the dramatic changes embodied in this notion part of the more established information and network economy, or is the new economy a whole new economic system?

The last sentences of this essay discuss the role that networks themselves play in economic life. There is a description of every player involved in the supply and demand of networks. From service providers to infrastructure makers, networks are created. Corporations, governments, and individual users are just a few examples of network customers. Producers of networks must contend with the networks' complex and convergent market. Telephone, computer, and broadcast networks' historically separate business columns are coming together to form integrated networks. Coordination is required between the various network levels, from the infrastructure at the bottom to the services at the top. The network producers seem to be dealing with this predicament via mergers and concentrations. What does this entail in terms of liberty, competition, and regulation in the media industry?It is interesting that, up until the middle of the 1990s, home customers lagged behind businesses and governments in embracing new media. In the consumer market, the majority of them failed. What caused this failure, and why? Why have people in rich nations just lately begun to use new media on a large scale?

The Current Communications Revolution's Causes

In the 1960s and 1970s, the number of telephone lines increased by 10% annually in western nations. Growth slowed down throughout the 1980s and the early 1990s. Considering the sated demand for first telephone connections in typical families, growth percentages were nevertheless substantial. Long-distance and international calls had the biggest rise. The demand for mobile telephony began to increase quickly in the second half of the 1990s and began to displace that for fixed lines, particularly in emerging nations without a conventional infrastructure.Separating digital communications from traditional communications will result in a virtual explosion rather than an acceleration. Many times, it has seemed like there is more demand than there is supply for data communications. This has often led to issues with business data and telephony communications.

The availability of media, channels, and broadcasters has significantly increased in the field of mass communication. Numerous technological, political, and legal barriers to supply that existed in the last several years have been resolved. One may choose from dozens of new channels, shows, and subscription services in the majority of western nations. On the surface, supply seems to outweigh demand. This assessment would be accurate, but it would not take into account the decades-long lack of chances for choice, the rapidly growing demands for social and cultural individualization, and the absence of specialized channels for businesses to advertise on. And the market is still expanding. The amount of money spent on media by households as a whole keeps rising, in part because new media aren't piled on top of existing media but rather complement them.The recent acceleration, and in some instances explosion, in the demand for communication media cannot be fully explained by general trends in society, the economy, or

culture, or by the availability of new technology. The following elements driving the rising demand for information and communication media in industrialized countries were initially identified by Saunders, Warford, and Metcalfe.

1. Increase in manufacturing process scale.
2. A rise in organizational complexity and the division of labor.
3. The mechanics of information generation are changing.

Because it is focused mostly on economic factors, this list is both incomplete and not totally accurate. For instance, it ignores social-cultural factors like individualization and shrinking family sizes, which have a significant impact on the demand for communication medium. The absence of historical specification and the assumption of linear progression, even from an economic perspective, are the two most significant challenges to an explanation based on these variables. Contrary to this, I will outline a concoction of background variables that have impacts over the long, medium, and short term and do so at varied rates and intensities. In a thorough historical-economic review of technical advancements in the United States in the late 19th and early 20th centuries, American scientist James Beniger pioneered such a depiction. It is crucial to quickly restate his story as I'll be applying it to the present situation.

Beniger shows that there was a true information and communications revolution within the time period just described. He believes it to have been a response to the industrial revolution's failure due to its subpar infrastructure. By the middle of the 19th century, there were several issues of contention. Together, they created a crisis of control. During this time, physical manufacturing, energy extraction, and transportation increased in size, speed, and complexity but organizational and communication controls lagged behind. According to Beniger, the industrial revolution's control crisis occurred when goods could be moved at the full speed of industrial production, night and day and under virtually any conditions, not only from town to town but across entire continents and around the world, thanks to the harnessing of steam power. Numerous frictions, including issues with coordination in industries, public transportation, and the distribution and sale of bulk products in department shops, were indicative of the crisis. The crisis was resolved by a control revolution in the second half of the 19th century, which was characterized by the following three series of innovations.

1. A second revolution in communications.
2. The emergence of bureaucratic functions, clear job divisions and hierarchies, rationalization through formal processes, preparations, and time synchronization are examples of one bureaucratic organization.
3. The development of new communication and transportation infrastructure to manage the tremendous rise in mass mobility of both people and products.
4. Using mass media and research to reach and map a previously undiscovered mass of customers.

Beniger discusses how a variety of new communication tools that are still in use today developed quickly over the course of a lifetime. He mentions the rotary press, typewriter, transatlantic

cable, telephone, cinema, and photography and telegraphymagnetic tape recording, radio, wireless telegraphy, and, slightly later, television. They are the means of a control revolution, according to Beniger. Given the list provided, we choose to refer to this as the first communications revolution of the modern era since the advances of the control revolution go well beyond new methods or media and also include fundamental organizational and programming principles.The era d saw the invention, development, and introduction of all the aforementioned methods on a modest scale. They spread widely as the primary technologies of an economic era marked by mass production and mass consumption between 1920 and 1970.

The Second World War and the ensuing race in the development of weapons and space travel led to a comparable, if shorter, era of invention, research, and innovation with the computer as its primary medium. Computers have advanced at an astounding rate since 1950. they are already in their sixth generation. The third and fourth generations were crucial because to their downsizing and chip technology. They opened the door for extensive digitization and communication media integration.Beniger asserts that after the Second World War, the computer has supplanted bureaucracy as the most significant tool of control. He views the development of computers, the microelectronics revolution, and the information society more broadly as just a new, though much quicker, stage in the control revolution of the modern period. This, in our opinion, undervalues the significance of contemporary advances. To support the claim that we are now experiencing a second control crisis, which is in part being resolved utilizing the media of a second communications revolution, it is useful to apply Beniger's analysis to the current situation. Because it is clear that the three series of breakthroughs that Beniger believes are the answer to the control revolution have reached their conclusion. In fact, they are now obstacles to current growth. This holds true for specific bureaucratic organizational structures, the clogged and polluting system of transportation for both people and goods, the dispersed forms of mass communication, and the escalating issues with mass research and marketing in a society that is becoming more individualistic and diverse. Networks in the new media might be useful tools for resolving these issues. They are able to boost companies' flexibility, efficiency, and productivity, enhance all types of logistical operations, replace the movement of people and products with the movement of information, and successfully connect with a targeted audience of communicative customers[10], [11].It is debatable if modern technology isn't responding to frictions and bottlenecks in production, distribution, and consumption processes in a similar way to how nineteenth-century technology responded to the control revolution of the era.

CONCLUSION

In conclusion, the creation, sharing, and consumption of information has changed as a result of multimedia and broadband networks. With unprecedented potential for involvement and empowerment, these technologies have changed communication, entertainment, education, and commerce. To enable the full potential of multimedia material for societal improvement, efforts should be taken to close the digital gap, solve security and privacy issues, and encourage fair access to broadband networks. However, problems still exist in the area of broadband networks and multimedia. The advantages of multimedia material are restricted for underprivileged populations due to the digital divide, which is defined by uneven access to internet infrastructure.

To guarantee the ethical use and preservation of multimedia information, issues surrounding privacy, security, and copyright infringement must also be addressed.

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EXPLORING THEFLOW OF ECONOMY: A REVIEW STUDY

R Ravi kumar*

*Associate Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- ravikumar.r@presidencyuniversity.in

ABSTRACT:

The concept of a flow economy has gained traction as a response to the challenges and limitations of traditional linear economic models. This chapter explores the principles and implications of a flow economy, focusing on the shift from a linear take-make-dispose model to a more circular and regenerative approach. It highlights the key characteristics of a flow economy and its potential to foster sustainability, resilience, and economic prosperity.A flow economy emphasizes the continuous circulation of resources, materials, and energy within the economic system. It seeks to minimize waste and maximize the value extracted from resources by promoting reuse, recycling, and regeneration. Unlike the linear model that depletes finite resources and generates excessive waste, a flow economy aims to create closed-loop systems where materials and resources are kept in circulation for as long as possible.

KEYWORDS: *Circular Economy, Collaborative Consumption, Connectedness, Digital Platforms, Disintermediation, Sharing Economy, Sustainability.*

INTRODUCTION

Before the Second World War, the scale expansion of industrial processes in the United States had already reached its turning point. Production has previously been centralized in ever-larger divisions. Companies have gradually shrunk in size since World War II, not only in the United States but also in other Western nations. This shouldn't obscure another dynamic that has been occurring concurrently: the strategic management of industrial processes and the concentration of capital. These trends may be seen in the expansion of multinational firms, financial capital conglomerates, and business monopolization or oligopolization tendencies, all of which are addressed in article. The consolidation of media ownership in the hands of business moguls like Murdoch, Berlusconi, Malone, and Bertelsmann is a current illustration of the convergence of both processes. These folks don't want to combine the media they appropriate. instead, they're usually diversifying them to take up more of a growing market[1][3].Production may be decentralized if the all-encompassing parent corporation of the past is used as a starting point. The first stage of this trend was the globalization of western multinational firms. The western nations themselves then underwent a deep division, first in legally separate and regional divisions and then in subcontracting corporate operations.

Within western governments and public administrations during the last 15 years, decentralization of executive authority has also occurred via regionalization of operations, privatization, and

subcontracting. The commercial service sector, in contrast, has long been characterized by small-scale businesses. Recently, scale expansion has taken center stage. For instance, growing service organizations include cleaning services, IT firms, and others. Activities are still carried out locally, however.The rationalization and transfer of added value towards the location where all the money is concentrated are the particular economic motivations driving these tendencies of predominate decentralization, which are made more pressing during economic downturns. Controlling the growing size and structure of major organizations is a more general reason. This is connected to the growing geographic restrictions as well. In the past, concentration of manufacturing resulted in high setup costs, traffic jams, and other transportation-related issues.

In response to all of these organizational and financial issues, decentralized economic organization was created. However, the demand for communications increased significantly as a consequence, leading to capacity issues in the current infrastructure. Large firms have been ready to make significant financial expenditures in building their own national networks and installing cutting-edge private branch exchanges because of the inflexibility and lack of capacity un public networks. If one considers how many strategic chances of choice modern technology creates, this is hardly surprising. Companies have the option of selecting the optimal location for each of their unique manufacturing, distribution, information, management, support, and maintenance operations. Therefore, manufacturing might occur in areas or nations with the most skilled and dependable labor force. As a result, manufacturing is done in low-wage nations or close to markets, distribution relies on the greatest infrastructure, and knowledge is concentrated in high-tech hubs. A metropolitan city near financial centers is the ideal location for management, which needs excellent internal communication and support services. Thus, great concentration and specialization may coexist with a variety of activity. Business activity' physical closeness to one another seems to be less significant now.

The geography of flows has taken the place of the geography of sites. The logical conclusion is that only cutting-edge communication networks can support this business network structure, which includes scale expansion and scale reduction.Trends across various corporate divisions, or more specifically, manufacturing processes, serve to highlight the conclusion drawn in the preceding paragraph. A network structure of roles, responsibilities, and activities also develops inside organizations. The phrase movement from just-in-case to just-in-time production as well as from mass production to flexible specialization and from Fordism to post-Fordism have all been used to characterize this fundamental change. The contemporary industrial production method built on Taylorism and the assembly-line system that predominated in developed nations until recently are discussed in the first section of these differences. Here, maximizing productivity while moving as quickly as possible was the objective. Machines had to operate on a single mass-produced item for as long as feasible. There was a high degree of specialization both across and within divisions. Transit was handled by assembly lines and other modes of mobility. To keep production running amid failures, it was necessary to retain employees, parts, and equipment on hand. This system, which was so focused on speeding up continuous mass production, actually had delays at practically every junction.

The linear structure contained an excessive number of phases and connections that operated at various speeds. Consequently, several logistical issues were raised. The building was susceptible

to even the tiniest malfunction. To synchronize all the divisions and procedures, a complex hierarchical line structure was required. The path between all the divisions becomes longer and more difficult the more sophisticated the final product is. As a consequence, delivery times were prolonged and inconsistent. Only five percent of a product's time in the plant was spent being processed twenty years ago, and thirty percent of manufacturing expenditures were spent on internal storage, coordination, and transportation. To put it simply: this kind of manufacturing process was characterized by partial aspect optimization, enabling independent equipment and employees to operate more quickly. In the 1960s, this process was delayed and the rise of productivity was constrained due to the increasing complexity of goods and demand differentiation. To force manufacturers to accept reality, however, it adopted the 1970s economic crisis and the Japanese economic system as a model.

The substitute, created at significant Japanese assembly businesses, optimized the whole manufacturing process. Instead of being divided into stations, tasks, and activities, the process was carried out in parallel streams where identical components and full products were manufactured. Of course, these streams' stages were also separated into segments, but these segments were uniform and backed by production teams that operated quite independently. These production teams performed a variety of tasks, continuously improved their performance, and were in responsible of overseeing the quality of their own output. Hence, quality circles as a moniker. A tiny crew that was recruited from the quality rings itself managed the few available segments. The work completed in the segments needed to come together perfectly for this method to operate. Waiting times were not accepted. There is always a need for information to be available. Direct contact between production teams was essential as a result. To integrate all necessary forms of communication, media networks quickly became necessary as industrial processes became more complex and distances widened.

They were required in order to combine computer-aided manufacturing and computer-aided design into a single cybernetic system. This system in turn needed to be linked to office systems, personnel information systems, distribution and supply systems, and management information systems[4][6].This flexible specialized technique, facilitated by information and communication networks, has proliferated globally over the last 20 years and taken over as the primary mode of production. Moving on to the domain of distribution, circulation, and consumption was the next phase. The change of office activity and the processing of information and knowledge was first necessary.Although it is difficult to quantify and contrast variations between factory and office productivity, it is commonly known that factory productivity rose far more than office productivity over the 20th century. The disparity was seen as a growing economic issue because, although costs per individual product were steadily declining, the proportion of administration and management expenditures in overall costs was rising, both in absolute terms and relative terms. The causes are obvious: office work is and has always been quite casual, unstructured, and little automated. But during the last 15 to 20 years, this has drastically altered. There have been numerous organizational issues and fits and starts in the automation of traditional office tasks. Information technology is essentially a system of control and coordination of people, in particular white-collar workers, not yet attained by Taylorism, according to Italian computer maker Carlo de Benedetti. When an office is viewed as a system of information processing passing through stages of generating, producing, collecting, processing, multiplying, distributing,

storing, retrieving, and interpreting data, it quickly becomes clear that a more Tayloristic, or even factory-like, organization can be created for office work.

This idea of office labor is essential for structuring, formalizing, and standardizing this specific kind of work. Automation will be possible as soon as the required technologies become accessible. High-end office technology is still a relatively recent development. Consider the copier as an example. it was just released 35 years ago. Clearly, during the last 15 to 20 years, ICT has automated a number of distinct stages of the aforementioned process. But this hasn't yet led to a measurable boost in productivity in the typical workplace. The changes seem to have been too fundamental and implemented too quickly for employees and the organization to effectively adapt to them. Although a great deal more information is processed and a great deal more communication channels and sources are utilized, it is debatable if the quality of office supplies has improved and actual resource savings have been realized. In any case, the paperless office will remain a pipe dream for some time.

DISCUSSION

The really fundamental adjustments will be made by network technology. Major improvements in the structure, productivity, and efficiency of office work are not likely to occur until either integrated office systems are deployed or all current hardware and software are networked. Connecting tasks like word processing and graphic design to databases, archival systems, and electronic supply management will be the initial stage in this process. Workflow automation is a pretty fitting name for the next stage. The network of departments and employees must complete each duty in turn to complete the whole administrative process of an office. A window on the monitor shows a list of the day's tasks. All completed tasks are noted and sent to the following network station. The office streamlining process won't be finished unless integrated tele- and data communication networks are used to expand it to the workplaces of suppliers and customers. The network will act as the office's equivalent of an assembly line, one that doesn't end at the door but instead extends outside to link to other lines. As a result, networks will have an even bigger impact on offices than assembly lines had on factories.

Naturally, this does not imply that networks will result in the same level of standardization and job division as existed in factories. Working in teams and doing a variety of tasks will still be options. For groupware or computer-supported cooperative work that emphasizes collaboration, special programs have been created. Additionally, it is challenging to formalize tasks like creating, producing, collecting, andmost importantlyinterpreting office information. Consequently, the network as the office's assembly line might have diverse effects on different groups of workers, including those who continue to manage and communicate informally and those whose jobs are defined in a factory-like manner.The movement of information and communication has gradually surpassed the flow of physical goods in importance for the contemporary economy. At first, they simply provided support for the coordination of flows of physical goods in transit, but with time, they become more independent. The so-called service and knowledge economy is now present in all industrialized nations. Communication and the sharing of information are the main economic activity in this economy. Every operation at every level of economic activity must have access to accurate and timely information. Electronic networks are being utilized more and more to achieve this. Knowledge networks are a specific

sort of network that focus on the production, dissemination, and exchange of a certain kind of information. They are ICT networks created for the production, gathering, sharing, and application of knowledge[7][9].

Because knowledge is created and processed according to certain standards, it differs from other types of information. The creation of scientific knowledge, for instance, is aided by the scientific method norms. A collection of facts and causal relationships that explain how things function and how we might utilize them can be referred to as knowledge. For a distinction between knowledge, data, information, and wisdom.People who utilize social and media networks to produce, trade, and apply all forms of information make up the real knowledge networks. To differentiate it from entrenched knowledge, migratory knowledge is knowledge that may be transferred easily. The explicit and codified information found in books, papers, designs, programs, databases, and other files is referred to as migratory knowledge. The generation, sharing, and use of this kind of knowledge in digital and accessible forms have all been greatly facilitated by ICT.

Using knowledge networks for embedded knowledge, also known as tacit knowledge, is far more challenging. This is the collective know-how, special talent, craftsmanship, and group competence that individuals, in this instance, employees, possess. In the complicated flow economy focused on collaboration, this form of knowledge is not losing importance but rather gaining it. Here, knowledge generation becomes more communal and less personal as a result of learning and practice groups.Additionally, the process of producing knowledge is not something that is static. The majority of information communication occurs informally, via informal social networking rather than through official channels.

Tactic information that is socially constructed, subject to change, and ingrained formally must be removed with care. Organizations strive to do this via knowledge management. It makes use of ICT and ICT networks, especially computer-supported collaborative work and online learning communities, to build expert systems and knowledge databases that extract and make explicit all of the available workers' professional expertise. These staff must cooperate in order to do this. Their primary resource as independent professionals, their explicit knowledge and tacit competence and expertise, must be transferred to the collective of the company. All different sorts of tangible and immaterial rewardsfrom bonuses and career promotion to status enhancement, company identity, and work satisfactionappear for this purpose. A basic issue, however, is that the flow economy of flexible employment and subcontracting weakens loyalty to the company and the desire to share one's knowledge with others.

The possibility of the so-called virtual organization is increased by networking both inside and across companies. Unfortunately, this is a vague idea with several interpretations. The following organizational and technology concepts are most often combined.First of all, it alludes to the previously mentioned internal network structure. The expanding significance of cooperation in business redesign is emphasized here: independently functioning and often changing multidisciplinary groups bridge the traditional organizational boundaries and departments.The idea is also used to the expansion of outside network organizations. In this instance, it highlights the contemporary practice of dividing and isolating portions of the organization via privatization, subcontracting, and a look for partnerships, while keeping these parts linked through networking.

It also emphasizes the rising trend of collaboration, resulting in the formation of federations and alliances amongst once autonomous businesses.

The adaptable design of the employment system and working circumstances is a typical third interpretation. In this manner, previous restrictions on time, location, and other labor conditions are also overcome.The crucial function that ICT plays in the virtual organization is highlighted in a fourth perspective. In this book, this interpretation is preferred. The term virtual organization refers to a group that relies heavily on information and communication technology and aims to operate mostly outside of geographical, temporal, and physical limitations. In the words of a well-known AT&T commercial from the 1990s, it is a company that operates whenever, whenever, and however. It should be emphasized that the first three applications of the virtual organization idea outlined above may be carried out without the use of ICT since they are just new organizational concepts. Of course, as was previously indicated, they benefit greatly from the use of ICT. However, the ability to do tasks outside of time, space, and physical limitations is at the heart of the word virtual. By constantly changing the organizational methods one employs to achieve the objectives, when both means and goals are specified in the most chapter form, it signifies a growth in the chances for choice.The most ethereal kind of association we are familiar with is the virtual organization. A online organization is the best sort of it. This might be a temporary network of professionals utilizing the Internet to collaborate remotely on a specific task, perhaps without knowing one another but potentially serving a global market. The majority of firms use ICT significantly are not primarily virtual organizations. A few days a week of telework or telestudy does not transform a company into a virtual one. Time, location, and physical circumstances continue to be the organization's foundation. A few characteristics of virtuality, such as extra options and switching possibilities, have recently been introduced.

Whether a virtual organization, in the sense of the fourth definition offered, can endure is the key issue. In addition to being an chapter sort of linkage, it is also quite unstable. It might have a limited lifespan or continue to divide. The most recent experience with teleworking and offices without physical workspaces shows that ICT may be used effectively as long as virtual modes of work are combined with conventional or natural ones. When virtual ways entirely replace conventional methods, we create a form of ideal virtual organization that won't endure for very long and isn't truly able to function in accordance with this ideal. Because there are more options available, time and location restrictions do not always disappear. Instead, since it serves to enhance our wants, the use of ICT radicalizes the significance of time and location in all of our activities. The thoughts and bodies of its own workers or independent experts, as well as the hardware and software of communication systems, the international telephone system, and other physical circumstances, are all still connected to even a web business.

Hierarchies, Markets, and Networks

ICT networks serve as routes for the interchange of commodities and services in the flow economy previously outlined. The issue in this situation is if they also contribute to the development of a novel economic structure. The following will go through if they really do generate a whole new economy, as was asserted in the 1990s.The well-known paper Neither Market Nor Hierarchy: Network Forms of Organization by Walter Powell was published in 1990. He contrasted markets, hierarchies, and networksthree common types of modern economic

organizationin this paper. The motivation for this will come from the comparison. As networks of production, trade, circulation, and distribution have developed throughout human history over thousands of years, it will be argued that networks are a form of economic organization that is not new. However, they are now emerging as a form of organization and technology that fills the gap between markets and hierarchies, which have dominated the economy since the industrial revolution. Even though this shape is clearly different from markets and hierarchies, I want to place it there. These three varieties are the best ones.

Combinations of these three economic types make up real economies. They describe whole economies from an organizational standpoint, in my opinion, as well. Hierarchies rule a communist or so-called command economy, whereas markets rule a free-market economy. Networks take on a specific significance in the so-called mixed economy. These simplifications call for a number of qualifiers, nevertheless.Markets are structured on the free exchange of values between autonomous agents. This trade can only exist under a legal system that grants the participants property rights and holds them accountable for the commitments they make in purchasing and selling contracts. Actors are no longer autonomous in a hierarchy. As a result of being hired, they join the interaction between employers and employees. They are reliant on one another. Actors in networks come to agreements and form groups more or less freely. Their interdependence results from their cooperation, which is based on their complimentary capabilities.

Independent producers and dealers were gradually brought under a wage condition in the ever-growing corporate and governmental hierarchies after the industrial revolution. This was/is the standard in communist nations for everyone. More and more performers are becoming semi-independent as a result of having both an employment connection and their own company due to the economic growth of networks. Freelancers, professionals with a certain amount of autonomy, and subcontracting companies are all good examples.Profits are the main objective of the market model of economic organization. This is accomplished via specific price-driven methods of production, distribution, circulation, and exchange. In order to handle required tasks and circumstances independently, hierarchies are organizational systems that have strayed from the normal societal division of labor. Government and management are two of its well-known names. The true objectives of the players involved here change to their own professional progress within the company, or their careers.

Prices do not control their behavior. organizational procedures do. The development of networks satisfies the expanding organizational requirement to accomplish shared objectives in a highly developed labor division. The invisible hand of the market and its pricing, as well as the visible hand of management and its procedures, do not, however, bring about the realization of this. rather, reciprocal benefits that are realized through conscious agreements of interdependent actors and their connections do. This is regarded as the best balance between freedom and control in a setting that is becoming more complicated all the time.Cooperation and rivalry have always existed throughout the human web's history. This combination is made ideal by modern networks of organization and communication in the business. Strategic alliances, federations, oligopolies, and even monopolies coexist with intense competition in the contemporary capitalist

economy. If it ever existed, the free market of independent producers and merchants producing and trading a single commodity independently has vanished.

A complex value chain that includes production and trading calls for a clear division of labor and effective teamwork from all parties. Only some segments of this value chaintypically those closest to the consumerare competitive. All types of retail marketplaces, including auctions and stock markets, are still quite competitive. However, strategic alliances and labor divisions based on collaboration in con- tracting and subcontracting ties govern the massive production and distribution networks. The preceding discussed how this tendency has been influenced by networks both within and between organizations. The chart below shows that despite all requests for liberalization and deregulation to increase competition, the contemporary capitalist economy, including the media sector itself, continues to be highly structured and controlled. with the exception that this organization increasingly assumes a network form.Every style of economic organization reveals a certain kind of coordination and control. Control refers to the control of economic processes via resource allocation decisions. It needs strength, stature, and responsibility. The division and synchronization of tasks is coordination. It requires the participation, coordination, and permission of all parties. The idea that a decrease in vertical control mechanisms is associated with an increase in horizontal coordination mechanisms is a recurring one in the literature on new organizational forms. Networks, which are seen as being 'flat' horizontal structures, are credited with this connection. However, I believe that this is somewhat incorrect. Control and coordination are necessary in any kind of organizational structure. No transition from control to coordination occurs. All that is changing is the nature of control and coordination[9][11].

Contracts are used in markets to create control, while prices are used to accomplish coordination. Since all agents are, in theory, equal, both are horizontal. They do, however, incur what are known as transaction costs. Historically, the hierarchy of corporations and government agencies has exchanged market transaction costs between players for internal coordination expenses. In balancing supply and demand, the visible hand of management supplants the invisible hand of the market. Management tries to maintain control in hierarchies via authority, command, and supervision. Centralization of decision-making is often meant by this. By formalizing, standardizing, and specializing duties in a clear division of labor, coordination is established. Organizational resources, staff talents, and time are distributed in accordance with predetermined plans. Bureaucracy is the term used to describe this mix of vertical control and cooperation.Vertical and horizontal control and coordination are cleverly combined in the network type of organization. It is not surprising that a mix of centralization of capital and control and decentralization of production was formed in the past. ICTs allow for both centralization and decentralization to occur simultaneously, according to Lynda Applegate, who conducted a labor survey of more than 500 managers from businesses of all sizes throughout the globe. Middle management levels were eliminated, but hierarchical reporting and authority systems between top management and workers were maintained.

The senior management's area of influence grew. Employee reward and boundary systems came in many shapes and sizes. In addition, companies were more adaptable, responsive, and regionally flexible as a result of the availability of robust information systems to both the

workforce and the surviving line managers. They were able to organize and manage local activities themselves thanks to these tools, but only within predetermined boundaries. Additionally, the focus shifted from standardization and monitoring to learning as a consequence of the implementation of a more information-intensive management strategy.New forms of combining vertical and horizontal control in enterprises are made possible by information and communication networks. Information system technical control takes the role of human supervision. Bureaucracy is replaced by infocracy. Communication and knowledge networks enable coordination. They exhibit both vertical and horizontal traits. Computer-supported collaborative work, various cross-functional and virtual teams working inside and beyond organizational units, and so-called concurrent engineering are all horizontal. Identity and performance controls, employee registration programs, and password-protected databases are vertical.

Forms of economic structure should not just be considered from an economic perspective. they also have implications for society, morality, and the law. For instance, there are several approaches to dispute resolution. When the parties involved cannot come to an agreement and the standard procedures for market dealing are no longer effective, the only options are to go to court or another mediation agency. Conflicts are resolved by administrative fiat, which entails a higher level overseeing a lower one, in hierarchies. The parties involved in networks must deal with their own issues. Mutual interests drive cooperation, which is governed by accepted norms. These standards are developed over a protracted period of time when reputations and mutual trust are developed. These techniques are used by participants in networks to avoid conflict and solve issues more rapidly than they would in markets or hierarchies. In networks, reputation and trust are essential.

Flexibility is the third and final feature of the three types of economic structure. In the previous two centuries, economic expansion has gradually replaced markets with hierarchies, resulting in a bureaucratic organization with little flexibility. When corporate environments evolved at an ever-increasing rate and demand and supply showed significant swings, this issue became worse. A fresh control problem arose. As we have already seen multiple times, networks mix centralization and decentralization, making them considerably more adaptable than hierarchies. The most adaptable kind of organization is a market because of how rapidly prices may change. However, the immensely sophisticated modern economy can no longer be managed by the straightforward pricing system. To operate a kind of mixed economy on a capitalist foundation, additional adaption mechanisms have been incorporated. A kind of organization that promotes this goal is networks.In actuality, a certain arrangement of markets, hierarchies, and networks governs all modern economies. Markets predominate in certain economies while hierarchies do so in others. Networks emerge as more significant forms of economic organization in network societies.

CONCLUSION

In conclusion, the linear take-make-dispose paradigm is fundamentally changed by a flow economy to one that is more circular, regenerative, and sustainable. A flow economy proposes answers to the problems of resource depletion, waste production, and environmental degradation by placing a higher priority on resource efficiency, longevity, and shared access. In a world with

limited resources and increasing environmental concerns, adopting a flow economy has the potential to boost economic success, improve resilience, and drive sustainable development.

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AN NEW ECONOMY: COMBINATION OF ORGANIZATIONAL FORMS

Sarath A Pradeep*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, India,
Email Id-sarath.pradeep@presidencyuniversity.in

ABSTRACT:

The combination of various organizational forms in the modern economic landscape has given rise to a new and transformative economy. This chapter explores how the convergence of different organizational models, such as traditional corporations, platform-based businesses, cooperatives, and social enterprises, has contributed to the emergence of an altogether new economy. It highlights the key characteristics, dynamics, and implications of this transformative shift.The new economy is characterized by a blending of traditional and non-traditional organizational forms, leveraging the advantages and capabilities of each. Traditional corporations bring scale, expertise, and capital, while platform-based businesses harness the power of digital technology and network effects. Cooperatives emphasize democratic decision-making and shared ownership, while social enterprises prioritize social and environmental objectives alongside financial sustainability.

KEYWORDS: *Cloud Computing, Data Center, Disaster Recovery, Hosting, Infrastructure As A Service (Iaas).*

INTRODUCTION

Is the 'flow economy' also a 'new economy'? In the year 1999, this expression quickly gained a lot of traction. Unfortunately, the phrase has a wide range of interpretations and is somewhat vague. It indicates the expansion of the ICT industry. It is the conversion of other companies into corporations that depend more and more on computer technology and online communications. Finally, it refers to an economy that operates very differently from the old economy.There are both strong and weak arguments made about the new economy. The assertion that this economy leads to a constant gain in labor productivity and economic growth without recessions, high unemployment, or high inflation is a compelling one. The idea is that the 'old economy' will quickly be replaced by this one. The assertion that the new economy momentarily boosts economic growth and that it sparks a surge of inventions that initially speed up and streamline our economy's operations before perhaps inspiring the development of novel items is unconvincing. It is said that the economy continues to operate in accordance with the traditional principles of capitalism. This denotes times when the economy experiences slowing growth, increased unemployment, recessions, and inflation. Instead of using the phrase new economy, many who support this dubious assertion prefer to use terminology like information economy and network economy.

This makes the case that the weak claim may be supported while the big claim must be rejected[1][3].It was debatable for a long time whether ICT had any impact on economic development and productivity. The productivity paradox of ICT refers to this phenomena, in which significant investments are made in the technology yet the results are not immediately apparent or quantifiable. ICT was shown to have a fairly strong impact on the statistics of economic development and productivity in the second half of the 1990s. ICT contributed around 60% of the rise in US labor productivity during the second half of the 1990s, compared to 40% in the European Union, according to the EU-Economy 2003 Review. In the narrow sense of ICT manufacturers and ICT service providers, this appears to be a significant contribution for a sector that only accounts for 2.6 percent of the total economic output in the EU and 3.3 percent in the US, respectively, and 17.6 percent and 22.4 percent in the broad sense of service and manufacturing industries that use IT intensively. The latter include trade associations and financial services. However, it seems that between 1996 and 2000, the ICT manufacturing sectors had the greatest productivity growth rates, followed by the ICT service sectors and the service sectors heavily using ICT.

As a result, the ICT sector, which creates ever-more-powerful hardware and software at ever-lower costs, is the largest contributor to productivity increase. ICT investments are rising substantially as a result of this. Their contribution to the overall expenses of the GDP, which in 1999 was 4.2 percent in the EU and a percentage of investment nearly as high as 7 percent, was still more than their profits. The productivity conundrum therefore persists. The greatest effect of ICT on the economy is most likely yet to come. A first conclusion is that a sector with a share of the economy between 17 and 22 percent, or less than 4 percent, cannot displace the other sectors. I'm not referring about the modern fantasies that control the capital markets and the media. Between March 1999 and March 2000, ICT share prices on the financial markets were wildly inflated, but they soon burst like a bubble. The 'new economy' is said to have a number of essential traits, but in my perspective, these traits really come from a much earlier information and network economy.

First off, the information economy's goods are distinguished by high research costs and cheapmanufacturing costs. The majority of labor is put towards creating and developing things like software and data files. It requires very little effort to make several digital copies of them. In contrast, items in the material economy may be invented, designed, and manufactured much more quickly, but as production is expanded, more labor, money, raw materials, and transportation are needed. This attribute contributes to the 'old economy's' ongoing move toward the information services economy.The fact that information is an experience good is a second characteristic of the information economy. To determine if a product has sufficient value to be purchased, such as in this example, whether it provides relevant knowledge, one must first taste or learn about it. The only other option is to assume that the supplier will offer accurate information in advance.

This is the major cause of the prevalence of free services on the Internet and via other platforms, as well as the reason why any information company now requires its customers to have established a reputation for receiving high-quality services.Thirdly, the ability of the producer to sell and transmit the item to a buyer without losing it himself makes knowledge a unique

commodity or product. Producers and consumers exchange information. These days, it is simple to reproduce anything in digital form. This describes the present issue with preserving intellectual property rights in a digital setting and the frantic attempts made by the owners to do so.In a network economy, the fourth and fifth characteristics apply. They are a result of networks' primary characteristic, which is that they are systems of connected parts with a certain amount of coherence. By merging devices, connections, and information flows within, networks build information systems. When customers desire to switch systems as products, this characteristic first and foremost results in high switching costs. When switching from Apple to Microsoft, all operating systems, data, and applications must be replaced. This characteristic explains all the standardization disputes and the ongoing monopolization danger in the ICT industry. A system must have standards, and most users find them to be extremely helpful. This is the major cause of the Microsoft standards' widespread adoption by users, although sometimes unintentionally.

Network externalities, also known as network effects, are the fifth and final attribute. When more devices or people are linked, a network becomes less costly and more efficient. Email and the Internet become increasingly beneficial for those connected as more individuals gain access to them. A new media hits the so-called critical mass at a certain point, and from that point on it looks to naturally diverge until all prospective users are linked. This characteristic explains why telephone, cable, and internet providers want to have the greatest possible number of customers or clients and to acquire them as soon as is practical. It is a major factor in the recent wave of mergers and acquisitions in the new media industry and the primary reason why new media businesses incur significant debt to get control of the target networks[4][6].These five traits are really not novel. Information products, experience commodities, and network systems are all produced by the old economy. The traits do, however, become more crucial in the information and network economy.

Really, there are only two aspects of the network economy that are novel. The first one is the so-called value chain reversal. It is a cycle that starts with manufacturing and ends with consumption via distribution and marketing. In the network economy, the value chain is turned around and demand takes the customary lead over supply. More often than not, customers send the first cues, and companies respond immediately. With the use of online tools, buyers can more easily do extensive price comparisons. Additionally, they have the ability to band together electronically as buyers in order to control conditions and drive down prices, such as via the use of rating and filtering systems. On the other hand, manufacturers also have the option to plan and acquire components of their goods in bulk online. Additionally, they are able to comprehend their own sales potential and customer purchasing habits to a far greater extent.

A major impact of the change might be that inventories can shrink and that capitalism's recurring crises of overproduction would be lessened. In contrast to this, we see the destabilizing impacts of more quick and large-scale buying and selling in electronic markets more often. Clearly, a portion of the reason for the constant yo-yo swings on the stock markets may be attributed to the quick exchanges made possible by computer networks. They encourage financial speculating and spread crises and booms. For more on the social and psychological contexts of abrupt changes in markets utilizing networks as conduits.The value chain is continuing to be divided and dematerialized, which is a second major development. All information that is now available on

the processes of production, distribution, and consumptionboth for mature and developing productsis becoming more disassociated from the processes themselves. This data is handled electronically and sold independently.

In this approach, the value chain's many information-based components may be divided into several pieces, separated from the manufacturing process, and handled entirely electronically by various businesses. The basis of online trade is this. For instance, the online retailer Amazon.com is able to separate the most lucrative aspect of, among other things, the book industrymarketing and sellingfrom the mostly material process of making, publishing, and dispersing books and other items. The only things that Amazon.com itself holds are an electronic catalogue, a database of clients and suppliers, and distribution centers with modest inventories of best-selling books. It mostly makes use of other firms' stocks.

The organization and information of the manufacturing process may be disconnected in an expanding variety of network economy value chains. The most professional components are removed in this manner. The manufacturing and distribution processes, on the other hand, do not at all vanish. To keep their clients happy and to ensure their success, e-commerce merchants must rely heavily on the quick and consistent supply of their items, as many of them have discovered the hard way. The partial disappearance of conventional distributive commerce and its replacement by various information brokers is a significant result of this divide and dematerialization. As a consequence, there is a growing transition in the economy from tangible commodities to intangible ones. The difficulties of private information appropriation is one issue with this transition. This explains why the fight for copyright, standards, norms, and laws is becoming more and more intense.

The future capitalist economy may be significantly impacted by these two aspects of the network economy. The end of crises, recessions, inflation, unemployment, and exploitation won't be brought about by them, however. The flow economy has enabled the economy to recover from the crises of the 1970s and 1980s and to eliminate a lengthy list of bottlenecks in production, distribution, and consumption thanks to the expanding assistance of ICT. Direct production cost reductions were of the utmost importance in the 1980s. but, in the 1990s, the focus changed to increased production effectiveness and efficiency as well as improved strategic production control.ICT may have helped the global economy gradually recover in the 1990s via improved industrial process organization. This hypothesis, which has been expanded by a wide range of economists from the Marxist Mandel to mainstream economists like Forrester and van Duijn, would fit in quite well with this supposition. It is notably widely known via the work of the Russian economist Kondratieff.

This theory claims that the economy exhibits lengthy waves of roughly 50 years with an upturn and a downturn phase that are primarily triggered by the introduction of new technologies, in addition to brief trade cycles of five to seven years in length. We have seen four waves in the last two centuries, with the steam engine leading the first, electricity and the media of the first communication revolution the second, oil, steel, chemicals, and the combustion engine the third, and then four waves of electronically controlled devices led by the transistor and the computer.The industrial, transportation, and communications sectors were all significantly and significantly affected by these technologies. However, it took decades after their first

implementation before they seemed to clearly have an impact on economic growth and labor productivity. It seems that before technology has a bigger influence, it has to be adopted and domesticated in businesses and homes. With the advent of ICT, it seems that the same is now taking place.

The computer has been around for a while, but it has only just begun to permeate companies and homes due to miniaturization, exponential capacity expansion, and network connectivity. In this situation, computers are assisting in the elimination of bottlenecks and the development of several new goods and applications. After the Second World War, the global economy began its most recent long wave, which began as a depression but quickly converted into an upturn that lasted until the early 1970s. Midway through the 1990s, a fresh upturn emerged. ICT in general, network technology in particular, and, to a lesser extent, biotechnology, may trigger a new long wave that this will likely usher in. While recessions are often light and brief, boom times in the upturn phase of a long wave are lengthy and achieve high growth rates. Schumpeter, another proponent of lengthy waves in the economy, has underlined that the upturn is marked by a number of innovations. He claims that the development of capitalism has been marked by constant innovation and devastation. Young, inventive business owners launch a number of risky ideas during the innovation boom that will eventually be partially adopted by the whole economy. The emergence of Internet businesses, the Internet hype, and their subsequent partial mainstream acceptance by the economy and culture make it easy to identify this trend[7][9].

DISCUSSION

The Producers: From Infrastructure to Service Providers

The 'communication branch' of the economy is described in this section along with how it benefits from the technical and financial advancements that were previously covered. The five parties involved in networks must be distinguished clearly since the operations in this industry are so diverse. They are the infrastructure producers, the builders and maintainers, the operators and administrators of both public and private networks, the service suppliers, and the network users. The next section discusses the final of these parties.It is necessary to distinguish between the vertical columns of the various networks, such as the telephone, computer, and broadcasting, and the horizontal layers of the functions carried out by them, in order to comprehend what is happening in the media sector in general and in the production of networks in particular.

The level of material infrastructure now sees the biggest capital turnover. Global sales of telephony, data, and mass communication equipment total roughly $100 billion annually. It is obvious that there are close ties to the microelectronics sector, notably in terms of components and terminal equipment. Spending on nodes and exchanges, such as phone exchanges, robust mainframes and servers for data communications and recording, and transmission and receiving equipment for mass communications, accounts for the biggest amounts. Every time a new network is built, sales of cables, switches, and transmitters soar. Then there is a transition toward terminal equipment, from individual devices to whole business and home systems.In both tele- and data communications, a noticeable horizontal concentrationor concentration on the same level in the production chainhas been present for a number of decades. Ten companies have primarily dominated the global market for communications and computer network equipment for

the last 20 years. The names Alcatel, Siemens Nixdorf, AT&T, Cisco, NEC, and Fujitsu are significant in this context. There has been a fresh wave of mergers, and experts predict that after these mergers, just five or six global corporations will be left.

The enterprises involved have abnormally high expenses for both research and development as well as excessively capital-intensive projects. High profitability and turnovers are thus necessary. A business requires a large and stable foreign market to thrive. So, despite considerable outsourcing to national companies, capital and control are concentrated more than in any other industry. The affected firms have nearly all undergone privatization.Years before, we could see other 'giants' emerging, like Dell, Compaq, Hewlett-Packard, Siemens Fujitsu, Hitachi, and Samsung. In 2004, the old giant computer company IBM paused and sold its manufacturing lines. Two facts stand out. First off, American and East Asian manufacturers are the most significant players in the computer hardware industry. However, only American businesses have dominance over the software sector. Microsoft effectively controls the software that the vast majority of the market uses due to its near-total monopoly in PC operating systems and web browsers.Equipment for mass communication is traditionally produced in close conjunction with telecommunications equipment. The same businesses are in charge. The emergence of satellite manufacturers from the aerospace and defense sectors has only somewhat altered this position.

Carriers and Network Administrators

Network operators and carriers, particularly when national telecommunication corporations are involved, execute or outsource the majority of the network development and maintenance responsibilities. These parties are regarded as a single party for the sake of simplification. They will be split apart once again in the next sub.Manufacturing of infrastructure has a clear propensity towards oligopolization. But an opposite trendone of shrinking monopoliescan be seen in the sectors of the most significant equipment users, network operators and carriers. Private networks now have the exclusive right of transmission across public networks.Initially, public network providers and carriers established a significant natural monopoly. Thus, there are several justifications for concentrating management and carriage:

1. The services are of wide importance to society.
2. They are a component of a system that combines transportation and communication.
3. They must approach the clients as closely as they can.
4. They encounter busy times and periods when capacity is underutilized.
5. The demand is not adaptable.
6. Technical limitations are related to the competition.
7. The use of a single system often has benefits.
8. Significant ongoing investments are required.

The demise of the current state monopolies in telecommunications and television could not be stopped notwithstanding the justifications for their continued legitimacy. Technical and economic-ideological issues contributed to the fall.A completely new scenario has emerged as a

result of the demise of governmental monopolies and the growth of private operators and carriers: a proliferation of infrastructure with the identical facilities being built next to one another. Building three or four information superhighways that are primarily intended for the same purposes is one of its forms. An overcapacity outside of peak hours will result from this. From the standpoint of society as a whole, this is a waste. Numerous disputes between businesses over the connection of their networks may arise in the near future.

Public broadcasting has rapidly declined in mass communication. The public broadcasting firms have to contend with an increasing number of commercial channels both nationally and locally. They were subsequently surpassed by loosely controlled international satellite broadcasting. Public broadcasting organizations, however, can only keep their status by receiving government protection or by making money off of it.At first, the decrease of public broadcasting has allowed for a significant supply differential. There is opportunity for many new broadcasting channels thanks to the new services. But preliminary evidence suggests that a concentration of ownership and structure is happening quickly. There is no need to lower the number of channels as long as there is fierce national rivalry. However, major media giants like Time Warner, Murdoch, Bertelsmann, Hersant, and the channels of Silvio Berlusconi have formed new national broadcasting organizations or quickly gained control of them. Five to 10 media behemoths are gaining dominance of the global market in this industry as well. Time Warner with America Online and Disney with Capital Cities ABC were first in line. They showed up in significant mergers in the 1990s.

Public monopolies are giving way to private oligopolies throughout all of the communication industries. It is crucial to remember that both may control a natural monopoly. On a national level, the public monopoly now operates or did. Private oligopolies function on a global scale. Although there is essentially competition and no outright monopolies on the market, they may divide the global market among themselves, set pricing, and gain from international legislation on standardization and interconnection. Large multinational phone firms are joining forces and merging more often. A few multinational corporations are getting ready to split up the global market. The end consequence will be a few private oligopolies with little competition but no democratic oversight taking the place of a government-controlled public monopoly without competition.

Service Companies

The four kinds of network services are: communication services, significant information services, transaction services, and merely technical and organizational tele- and data communication services. The preceding section covered transportation, construction, and maintenance services. When I refer to tele- and data communication services, I mean both standard services like computer operating systems and web browsers as well as specialized services required for the creation and maintenance of infrastructures. For major businesses and institutions, they provide security services as well as backup facilities. They also assist businesses with the creation, upkeep, and support of integrated business systems[10].Transaction services range from straightforward transmissions of payments, orders, reservations, and other online commercial services via the Internet to highly specialized financial operations for businesses, banks, and investment firms.Communication services provide new exchange

capabilities for voice, data, text, and picture interchange to a variety of organizations and consumers via open networks.

These services include Internet access, Voice over IP, email, instant messaging, videophone, and videoconferencing. They also include so-called digital telephony.There are several information services. Internet information search engines like Google and Yahoo come first. Then there are companies that provide data processing and storage services. Services for generating, modifying, and disseminating data are then available. 'Creating' is done by a variety of expert consultants, including those from the fields of science, law, accountancy, and architecture, who have studied 'networking'. Network software engineers are involved in editing. Database distributors, various types of electronic libraries or videothèques, and Internet publishers all handle distribution. The broadcasting companies are the last group, and they provide their audiovisual programming and other services in many new forms and channels.Most of these services, with the exception of public communication services, are completely commercial and unregulated. Although they increasingly provide their services online, they are not limited to this medium. Instead, historically they have provided their own private, higher-capacity, and more secure telephony and data connections.

CONCLUSION

In conclusion, combining organizational types in the new economy signifies a fundamental change in the way economic activities are organized, carried out, and evaluated. It has resulted in a more adaptable, cooperative, and socially responsible economic environment as conventional companies, platform-based firms, cooperatives, and social enterprises have come together. Adopting this new economy creates opportunities for innovation, sustainability, and inclusive economic development, but it also demands careful thinking about policy and regulation to ensure that its advantages are distributed fairly.

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NETWORK SERVICES: CATEGORIZING THE BUILDING BLOCKS

Rajesh Sisodia*

*Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-rajesh.sisodia@presidencyuniversity.in

ABSTRACT:

Network services play a vital role in facilitating communication, connectivity, and data transfer in the modern digital era. This chapter explores the categorization of network services, highlighting different types and their functions. It delves into the three main categories of network services: communication services, infrastructure services, and application services.Communication services are fundamental to network connectivity and enable the exchange of information between devices, systems, or individuals. These services include protocols and technologies such as email, instant messaging, voice and video calling, and virtual private networks (VPNs). Communication services provide the means for real-time or asynchronous communication, fostering collaboration, information sharing, and efficient coordination across various platforms and devices.

KEYWORDS: *Bandwidth Management, Content Filtering, Data Center Networking, Firewall Services, Intrusion Detection, Load Balancing, Managed Network Services.*

INTRODUCTION

It has been noted that network manufacturers and, to a lesser degree, service providers are showing signs of horizontal concentration. This refers to mergers and partnerships between businesses engaged in comparable activities at the same level of the production chain. When we go a step further and connect the three levels that have been addressed, we will see significant impulses toward vertical concentration, or the integration of several levels in the production chain, such as infrastructure manufacturing, network management, and service provision.The connections between and are at their greatest right now. The goal of operators and carriers is to acquire or maintain the position of being the primary service provider on their own network. In a broadcasting system that is fractured, this is simpler to execute. Due to current privatization practices, the reverse occurs in tele- and data communication networks. Carriers and operators are required to accept the services of rivals on their own networks. Network operators are struggling with their own services in this situation. If they wish to focus management, carriage, and service delivery, they will need to compete.

This is what telecommunications firms, and cable providers in particular, have attempted to achieve since the second half of the 1990s. Both horizontal and vertical integration are being worked on. Broadcasting programs and Internet services are now being offered by telephone companies, while cable providers are now providing both telephony and Internet services. On the

networks they run themselves, they are engaging in this activity. They acquire or combine their networks in both types of concentration[1][3].Concentration is a reasonable response to technological integration or convergence in the communication industry as a whole in today's economies. However, it might have political repercussions that are neither rational nor desirable. The firms involved risk having an excessive amount of control over a nation's communication strategy. And more particularly, they might have a significant influence on national norms, pricing, and technological tools for security and privacy protection. By providing integrated business systems along with their operating systems or other software, they may have an excessive amount of influence over organizational structure.It will enough to provide one example as a lesson. News Corporation sued Time Warner in 1996. The 24-hour news channel FCC from News Corporation was not allowed to air on Time Warner's cable networks. It is clear why: Time Warner owns CNN, a news station of its own.These concentration processes have been intensified since 1993, when the information superhighway paradigm made its breakthrough in the United States, Japan, and Europe.

Numerous companies in the phone, computer, electronics, software, and media sectors began working together and merging. In the end, the horizontal concentration of telephone, data, cable, and broadcasting networks in the form of broadband networks will be where the information superhighways reach their apex. They provide additional stimulation for vertical focus as well. Manufacturers of infrastructure made the decision to build and maintain their own networks when infrastructure was liberalized. Telephony, data, cable, and air network operators began to provide their own services.However, many businesses recognized they had been too fast in branding themselves as broad media organizations towards the end of the 1990s and the end of the hoopla surrounding the Internet. In the communication branch, shares in adjacent columns and rows were resold and mergers were canceled. Since then, most organizations have returned to their core competencies. The integration and focus outlined here, however, are permanent realities. The changes are brought about by ongoing processes of technological convergence and capital economic concentration.

DISCUSSION

From Deregulation to Reregulation

Deregulation, or a series of liberalizations, is what put an end to public monopolies. The presumption that competition would benefit all partiesincreased choice and cheaper pricing based on actual costsjustifies this fundamental shift in communications policy. However, the communication industry is not a typical economic sector due to all of its inherent monopolies. Here, it is not clear whether or not competition has positive consequences. Robin Mansell even asserts that it is founded on an idealism paradigm that does not match the reality. These fit a strategic model better. Oligopolies regulate their markets through well thought-out tactics. They cooperate in certain ways and compete in others. A monopoly does not end with an oligopoly. Instead, the engaged businesses defend their markets by upholding their own standards, maintaining tight control over the most lucrative so-called intelligent components of networks, designing clever pricing strategies, and negotiating with their competitors. Mansell contends that telecommunication competition is limited to certain market categories, such as the creation of peripherals and the provision of global communication services.

She comes to the conclusion that the oligopolies pass on to small businesses and families the rising costs of adapting networks, which were first supplied for the advantage of big or specialized international enterprises.Now it seems that the broadband expansion of a number of integrated networks, which will be built concurrently and will be partially linked, will result in the same thing. It is uncertain if their owners will face off against one another. All of them are motivated to allow their clients to cover the substantial outlays.

The number of rules swiftly turned out to be expanding rather than reducing as a result of the necessity to organize the growing complexity of this sector and resist these attempts at oligopolization. In every country liberalizing telecommunications, organizations have been set up to organize a private supply on public networks. The regulatory agencies in these nations are overflowing with volumes containing rules and standards. It is obvious that regulation is being changed. This makes perfect sense. More regulations will inevitably result from the proliferation of networks, operators, and service providers since it is simpler to control a single public monopoly than a number of private oligopolies. In this complicated position, it is also important to defend a variety of social, economic, and cultural values, including free competition, universal service, and inexpensive access to public networks. It is also important to protect cultural values from outside intruders. In order for partly or fully integrated networks to survive, there must be agreement on connectivity, standards, subscriber counts, prices, ownership rights, and other factors[4][6].

When numerous information superhighways are built side by side, the need for reregulation will surface once again. We presently have a perspective on at least three different sorts of superhighways that are available as broadband networks. The first is built using mobile telephony added to public fiber-optic telephone networks that have been digitalized and expanded. The PTOs are presently investing enormous sums of money in infrastructure expansion, digitization, and the development of new interactive services, such as Internet services with DSL connections. The same strategy is being used by their rivals, who also use their infrastructure.In nations with a high cable density, like the Netherlands and Belgium, the second sort of information superhighway is created by cable networks, which are of utmost importance. The focus of cable TV system operators is on finding ways to pay for the substantial expenditures required for the transformation of their distribution networks. The majority of the time, they already have broadband capacity, but they must be modified to support two-way traffic, which necessitates the creation of costly digital switching nodes and exchanges or the leasing of them.

Here, it is clear that there is a need for collaboration with telephone and Internet service providers since providing Internet access and telephony is a key objective.In the ether, the third kind of superhighway is built. These are the digital mobile and satellite communication networks that emerged from either telephony and data communications or from television. As comprehensive alternatives to terrestrial connections via cable, global networks of satellites orbiting near to the planet or high in space and terrestrial antennas are provided. This third kind will predominate in nations with few fixed lines already in place, such as those in the Third World in general and those with quickly expanding economies like China and India in particular.The same servicestelephony, Internet, broadcasting, and unique audio-visual

servicesare theoretically provided by all three kinds of superhighway or broadband connections. In actuality, they'll likely focus on one or two of them, most often telephony and the Internet or broadcasting and the Internet.

The access systems for computer networks and interactive broadcasting are among the most crucial facilities to govern. Who holds power on the future information superhighway will depend on who controls these technologies. Gatekeeping and other oligopolistic activities must be avoided, and regulations must protect producers' and consumers' right to open access. Computer networks have already seen the first test. A contentious legal conflict has erupted in the United States and other countries due to Microsoft's operating system Windows' integration of its own browser, Internet Explorer. The worry is that Microsoft is favoring its browser, search engine, and other products or services by taking advantage of its dominance in OS systems. Similar competitions have emerged in digital broadcasting. A number of vendors have created and released their own set-top boxes that have online portals, electronic program guides, TV program bouquets, and application programming interfaces. A few large interactive broadcast businesses are attempting to control the gateways, tools of selection, and program supply in the future of digital radio, television, audio, and video in a similar fashion to how Microsoft is attempting to dominate the supply of software and services. New national regulations for open access, interconnectivity, and non-proprietary standards are required to govern these instances of vertical integration.

Pulled and Pushed By Consumers

Governments and Businesses

The most significant drivers behind the technological and financial supply of networks are the owners and employers of private networks as well as the users of certain public networks. The majority of owners are represented by governmental organizations and multinational enterprises.The biggest and most sophisticated networks were built for military and space uses decades ago. The American worldwide defense network AUTOVON had cable connections as long as the whole American telephone network did in the 1950s as early as 1970. It already combined voice and data and had a variety of controls for prioritizing what was communicated. It has a number of backup facilities and could resist a nuclear assault. Therefore, it should come as no surprise that this sector gave birth to the majority of technological advances in tele- and data communications, including packet switching.

The development of satellite technology needed for quick worldwide communications has benefited greatly from space exploration.The financial industry is the second innovator in the adoption of networks. Without the international networks linking stock exchanges, significant multinational firms, banks, and investment funds, the current global economywhich transacts money valued at nearly 50 times the value of commodities every daywould not be possible. The first to spend billions in private networks linked by satellites or, if required, by terrestrial rental lines were the major international banks, insurance corporations, and credit card organizations. The networks in this industry have stimulated technological advancement in the transmission and processing of massive amounts of structured data.

Administration-Related Applications

International industry, transportation firms, and audiovisual media make up the third group of pioneers. They are in charge of the advancements in logistics, the heterogeneous connection integration, and broadband transmission.The fourth innovator in the development of networks is the big databanks and databases, which are sometimes linked to networks of institutions or libraries. They made strides in the areas of consultation, accessibility, and connection of files with various organizational structures.A genuine revolution in data processing has been made possible by the advancing power and compactness of computer hardware, the perfection of intelligent terminals, and the rising speed of packet-switched transmission. Increased usage of distributed data processing reduces the demand for massive central computer divisions.

The monitor systems application category is the second. These systems carry out measurements and analyze, arrange, and report the results. Process control systems have a long history of application in the food industry, heavy industry, chemical industry, and heavy industry. All types of safety and signaling systems are now advancing quickly.The fastest changes are occurring in the exchange of products, services, and people, however. The connections between registration systems that were previously independent help this branch the most. This provides fundamentally new features including completely automated booking and stock-keeping as well as computerized personnel registration and management.Database systems make up the last group of applications in the production and distribution sector. The most significant sorts provide news about the economy and finance, legal and bibliographical references, and marketing and credit information.

In the meantime, networks are built in offices by fusing together equipment, workstations, and previously disjointed operations. The two most traditional uses for computers are accounting and administration. The biggest step forward, though, is the automation of word processing, which keeps an office running. The most crucial step toward the simplified workplace is networking previously disconnected word processors and document management systems. Applications like email, virtual meetings, and digital archives are accessible via it. The inclusion of these to management information systems is also appreciated. These management information systems will increasingly be linked to the aforementioned systems, making them the brain of the firm. All of this is the consequence of process automation, logistics, and office automation coming together, which has been happening in big businesses for at least 25 years.

Demand is Increasing

The initial demand for computer networks, hardware, software, and services by small and medium-sized businesses, homes, and individual customers trailed substantially behind the demand by large national firms in the 1980s and early 1990s. This amply demonstrated the usual pattern of new media adoption, with big firms leading the way, followed by their professional staff and those employed in higher education departments, followed by SMEs, and ultimately, far behind, the vast majority of homes and individual customers. The final group must, however, accept the new medium in order to cover the exorbitant costs of extensive infrastructure expenditures. This explains the IT industry's frantic efforts in the 1980s and 1990s to launch one

new medium after another. These efforts may be referred to as a technology push since, up until the middle of the 1990s, practically all of them failed.

A remarkable number of new media products and services failed to find a market during the 1980s and the first half of the 1990s, including the videophone, videodisk, videotex, CD-I, first-generation PDAs, and systems for video on demand, to name just the most significant.We have only seen a limited uptake of PCs, digital and mobile phones, and eventually Internet connections in homes since the middle of the 1990s. It is only somewhat widespread since most of these new media are still only widely used in North America, Western Europe, and a few East Asian nations. Between 60 and 85 percent of households in this area had a PC in 2005, while between 50 and 70 percent had Internet connections. There is what is known as a digital divide since these new mediums are not being widely adopted in the rest of the globe. In the 1990s, North America and Western Europe seemed to find the advent of so-called full service networks, which are integrated networks of broadcasting, information, transaction, and interpersonal contact services for homes, to be a bridge too far. They were discontinued or significantly scaled down to only a few popular single services.

What are the major causes of these blatant failures of new media in the past and present in the consumer market? To respond to this question, it is important to understand that the adoption of new technology is a result of consumer domestication and producer design. Consumers domesticate new technologies by incorporating them into their own comfortable daily lives at home, at work, and in other private settings. Design anticipates domestication, and domestication completes design. Therefore, it would seem that the current push for household and individual consumer acceptance of new media has resulted in a separation of design and domestication. This discrepancy is caused by three interconnected traits.

First, the design, manufacturing, and marketing of new media are dominated by a supply-side perspective. Their demand is taken for granted when their costs fall to a reasonable level since they are believed to be so superior in terms of qualities like speed, mobility, comfort, and other advantages or communication capabilities, like those outlined in 1. Thus, unbiased market research before to and after introduction is rare. User groups are hardly asked to take part in design. Of course, users are kept in mind throughout the design and construction of new media. But rather than conducting a true and reliable experiment, placing them on the market still involves trial and error. All bets are on a new medium when it seems to be somewhat successful. when it doesn't take off, it's just dumped. In both situations, not enough is known about what leads to success or failure.

The dominance of technological design is the second feature of the emergence of new media. The majority of hardware and software is created by technicians. They give inadequate thought to user-friendliness because they are so focused on the artifacts' purportedly excellent technical capabilities that they fail to consider the viewpoints of actual users. They just can't fathom why a certain target market won't utilize their technologically better goods. It wouldn't make sense to decline them. They are unaware that embracing new technologies also involves social and cultural factors. Many customers will continue to use outdated technologies for personal and societal reasons that go well beyond mere utilitarian, logical goals. These reasons include ingrained habits, daily rituals, and emotional relationships.

The third and most fundamental cause of the mismatch between design and domestication is found here. A device perspective or service viewpoint is used when offering new media items rather than a social and contextual perspective. The technological convergence of the computer and the television is an excellent example. Technically speaking, it will become simple to utilize computer services like the Internet on TV displays and to watch TV on a multimedia computer. However, this does not imply that they will take on a prominent role in everyday life or in the actual settings and settings of homes. Computer usage is primarily a solitary activity, with users congregating around modest displays with extended keyboards, often in a study, to work and play. People enjoy themselves by watching big screens in the living room, kitchen, or bedroom while utilizing a restricted remote control. Watching TV is both an individual and a collective pastime. Multifunctional computers and TVs are not always acceptable in the social contexts and interpersonal connections of families just because they are technically available. This is where domestication began.

The same may be said about information, communication, entertainment, and transaction services, which although being seen to be more enjoyable and easier to use by its creators, do not manage to become ingrained in households' and individuals' daily routines. Research on the social and cultural contexts where new media are expected to function is surprisingly underfunded. In addition to the social interactions of gender, generation, position, and power in homes, the geographical features and use patterns in locations of residence, employment, and culture are also ignored[7][9].However, the very sensible explanation for why most new media failed to catch on with consumers, at least until the middle of the 1990s, is that they simply didn't provide enough surplus value when compared to traditional media. Most observers now assume that rather than entirely replacing the existing media, the new ones will be added to them. This is among the most stunning results of 20th-century media history. It implies that new media need to possess a distinct surplus value all of their own. As of this writing, it seems that customers are generally content with both new and old media, when utilized independently, including the Internet and traditional media like broadcasting, the newspaper, and telephone.

Additionally, they may be enhanced and modified to provide for greater comfort, selectivity, and interactivity. They provide such a wide range of variety within themselves that most customers seem to be satisfied with the options available.These somewhat pessimistic viewpoints do not necessarily indicate that new media, both current and future, will continue to struggle in the consumer market. Simply put, they are saying that success will take a lot longer than the new media sector would want. Furthermore, the eventual level of mass consumer acceptance of the new medium may vary from what is now anticipated. This is yet another noteworthy aspect of media history. For instance, the telephone was not intended to be a tool for casual conversation between individuals, particularly ladies, but rather for business and emergencies. At the turn of the 20th century, radio users were supposed to become broadcasters, but they ended up as listeners. Computers were not designed to be used for games. they were made to do calculations or process data.

The most significant way that new media is being used in homes is also unknown at this time. One sector of the industry believes that information and transactions will serve as the so-called trigger applications of the new media for the majority of families as well, notwithstanding the

continued dominance of commercial and professional usage. Another group, especially those with vested interests in the media and telecoms sectors, anticipates that it will largely be communication and entertainment, since these are the major uses of broadcasting, the press, and telephone in the 20th century.The possibility for differentiation, individualization, or person-alization of demand they provide is the primary factor in the more successful present and future introduction of new media. Compared to traditional media, users are far more able to choose the moment, location, and application type that best suits their unique demands for communication and information. The choices that people in the network society wish to make match these divergent demands. The eradication of the mismatch between design and domestication is even more essential when the settings of consuming grow more complex due to the differentiation of information and communication patterns in homes.

Power and Politics

Power is the main topic here. One of the most crucial social considerations in the development and use of communication networks is the distribution of power. By no means are these media politically or technically unbiased. Both centralization and decentralization are made possible by a network's structural design. There are several methods to link the center, nodes, and terminals. In the future, a person's status in society will be primarily based on whether they are central or peripheral inside communication networks, or whether they are excluded from these networks. The material sent over networks is of lesser relevance in comparison to this. This demonstrates how misleading the sayings information is power and knowledge is power really are. Being in the appropriate position to utilize information or expertise is just as crucial as having access to it. Few would think that scientists, information specialists, and journaliststhe exceptional producers and processors of knowledge and information in our societywere the ones in charge. One thing is certain: those who lack access to the new communication networks, as well as the expertise required to utilize or analyze them,and choose the information they disseminate, you will be helpless.

I begin by talking about the most fundamental level. People often overlook the possibility that as we grow reliant on networks, we might all lose our power. At the very least, computer networks seem to be exceedingly susceptible technologies. How can we lessen this risk so that everyone may use computer networks as effective communication tools?Many individuals have praised the new media's democratic potential during the last 20 years. They promised to reenergize democracy and make it easier for everyone to participate. They would also be empowering for citizens, customers, and users in other settings. What has the so-called digital democracy and e-government accomplished in the last 15 to 20 years? They would supply more and better political and governmental information, promote online public discourse, and increase involvement in decision-making, according to three statements. Which of these assertions is true?

I go to the organizational level in the second to examine whether networks are altering the balance of power inside enterprises. The widely held belief is that networks are flattening companies and assisting in the transition from bureaucratic, top-down forms of organizations to effective, horizontal ones built on collaboration and teamwork. Is this actually the case, or will more intricate arrangements of vertical and horizontal coordination and control be developed?In

the next two sentences, I descend to the level of the individual to examine what happens to users' personal freedom and privacy on the internet. The greatest detrimental impact of new media has been described as a significant loss of privacy. Dozens of publications with titles declaring the demise of privacy have been published in the previous five years. Is the situation truly so dire? What might be done in a computer network setting to ensure privacy? On the other hand, a possible benefit of new media is the expectation that they would increase personal liberty and provide customers, citizens, and users more options. Is everything truly as good as it seems, or is this freedom of choice merely apparent on the surface?

Social and Technological Vulnerabilities

Everyone is now aware that computer networks may have problems. We are continually alerted of new hacks, viruses, criminal activity, privacy violations, and system failures. Numerous conferences and seminars on information system security have been presented during the last 20 years. And even though the issues have been scaled down to specific technological, organizational, and legal dimensions, truly satisfying solutions have yet to be discovered.It's amazing how the issue of network vulnerability has been boiled down to concerns about technological security, as well as the preservation of confidentiality and privacy. In actuality, there are many more issues with vulnerability. The stability of the whole social structure as it interacts with emerging ICTs is at stake. The system is becoming reliant on forces it has little control over. When technology fails, the system either can no longer work or only functions with difficulties, often very large ones. It may also produce internal forces that oppose the employment of technology, resist its effects, or even destroy it. This may occur if particular social groups or classes believe they are being denied certain privileges or are being cast aside as social misfits in the network society.

Finally, units with a larger range may pose a danger to the system's overall strength from the outside. National sovereignty is therefore at risk in the majority of states as a result of nations relinquishing control of their own economies, cultures, and political systems to networks of worldwide broadcasting, the Internet, global business, and, most significantly, financial trading.This article's conceptualization of vulnerability as a whole is applicable to information technology as a whole. But specifically networks fall under this. They have the following traits that make them more vulnerable in everyday use. A network's size is its most crucial feature. The strength and utility of a network are primarily determined by its reach. The network also becomes more challenging for network administration to administer at the same time. There is a greater probability that something will go wrong. A network relies more on the caliber of the hardware and software than individual devices and programs do.

Networks also have the ability to integrate local and remote sources of information and their multifunctionality. However, if one of these functions fails, it has an impact on the whole network, either directly or indirectly. Computer viruses and computer hackers are two blatant examples. they often 'travel' uninhibited inside and across networks. The technological layout of a network may reduce the resulting failures, but only at the sacrifice of accessibility, flexibility, and effectiveness.The fact that many networks are patchworks is another aspect. Hybrid networks that combine highly developed and secure commercial and governmental networks with less developed and less secure public networks built on the traditional telephone

infrastructure are constructed to promote interconnectivity. The system's overall security is compromised by the latter's lower level of protection.

One of a network's strengths, as well as one of its limitations, is that it may be accessed by a large number of users who are linked to it. Unauthorized and uneducated users are more likely to get access to the network as a result. When compared to discrete parts, networks make information systems more complicated. New communication issues multiply. Additionally, complexity rises when local units are able to do more on their own. A network's likelihood of failure rises proportionally as its complexity increases. And it becomes more difficult to identify and fix the cause of such failures.Increasing complexity often results in a reliance on a small number of professionals, such as technologists and network operators. These networks are exposed to the possibility of expert drop-out or unreliability brought on by sickness, a strike, ineptitude, or fraud.

The speed at which operating systems and other network software are updated by their creators is a typical but preventable characteristic of networks. Immature network technology is promoted, followed by a continuous stream of security patches. One well-known example is the practically daily changes to Microsoft's operating systems. Users are often prepared to accept the risks because they choose the newest update and the biggest capacity, or because they are essentially obliged to do so by contract or when they purchase a new computer[10][12].The lack of backup facilities or their degradation is another preventable aspect of networks. There is no backup in the form of outdated hardware, software, or storage in the event of a breakdown. An associated issue that is more basic and difficult to prevent is the gradual erasure of outdated information, practices, and processes from employees' minds. For instance, it was necessary to bring back a lot of retired programmers and designers to work on the so-called year 2000 issue.

CONCLUSION

In conclusion, in order to provide connection, data transmission, and application delivery, network services include communication, infrastructure, and application services. These services are essential for enabling smooth communication, effective resource management, and the distribution of various applications through networks. The landscape of network services is further shaped by continuous technological breakthroughs and convergence, which provide new possibilities and problems for businesses and people in the digital era.

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CHARACTERISTICS ENHANCING VULNERABILITY: KEY CHARACTERISTICS TO CONSIDER

Neha Saroj*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-neha.saroj@presidencyuniversity.in

ABSTRACT:

Understanding the characteristics that contribute to vulnerability is crucial for addressing and mitigating risks in various domains. This chapter explores key characteristics that enhance vulnerability, encompassing both individual and systemic factors. It highlights how these characteristics interact and amplify vulnerability in different contexts, including social, economic, environmental, and technological spheres.At the individual level, certain demographic factors such as age, gender, and socioeconomic status can increase vulnerability. For example, children, older adults, and individuals living in poverty often face heightened vulnerability due to limited resources, reduced access to social support networks, and increased dependence on external assistance. Additionally, marginalized populations, including ethnic and racial minorities, persons with disabilities, and refugees, may experience systemic discrimination and exclusion, exacerbating their vulnerability.

KEYWORDS: *Complexity, Dependence, Fragility, Inadequate Security, Lack Of Awareness, Legacy Systems, Misconfiguration.*

INTRODUCTION

In reality, the majority of solutions to these issues restrict networks' advantageous traits. Some strategic decisions have far-reaching effects, such as whether to make networks smaller or less useful, integrated, and linked. This may be accomplished by setting up more focused, but optionally linked, smaller networks. There are several degrees of complexity and security for interconnections. As 'simple' as feasible may also be maintained for the connection itself. This indicates that all of the intelligence is contained in the terminal equipment at the center.Companies often choose to use pre-made systems rather than a hybrid setup of both old and modern technology or a number of independent devices in an effort to decrease complexity. They also aim towards compatibility and standardization. The most noticeable characteristic is access for everyone. The first feature to be limited was likewise this one. Most organizational and technological security in use today is built on limitations. However, a lot of experts claim that perfect network security will never be achieved. They shouldn't only use the fact that security depends on individuals as evidence for their assertion. A network's scale, multifunctionality, and interconnectedness, which are all desirable features, enable it to be user-friendly, but these features also inevitably raise the risk of malfunction and unwanted access.

Furthermore, any restriction on accessibility runs counter to the distribution of power and knowledge, which cautions against reliance on a small number of specialists[1][3].Installing hardware, software, and storage capacity backup facilities is a highly expensive procedure. The same is true for maintaining outdated equipment, organizational techniques, and operational practices. Backup soon becomes less important. Installation of a network would sometimes be unprofitable if appropriate and comprehensive facilities weren't kept in reserve.The list above demonstrates how most solutions restrict or even completely eliminate the utility of networks. Some remedies make people more vulnerable in new ways. This implies that some kind of compromise between network security and freedom or utility must be the end outcome.

The Distribution and Centering of Politics

The spread of communication media and an increase in education levels have without a doubt been the key drivers of the 1980s and 1990s global rebirth of the civil rights and democratic movements. The growth of global mass communication and telecommunications networks had a significant influence on both the fall of communist governments in Eastern Europe and the emergence of movements for democracy in emerging nations. One may argue that the fall of the Berlin Wall and the dissolution of the Soviet Union were ultimately inevitable due to the regular broadcasts of western radio and television programs and the rise in international phone conversations. Even highly 'closed' nations like Romania, Albania, or the southern Soviet republics, as well as a sizable number of emerging nations lacking in democratic institutions, proved to be sensitive to the affects of global channels of communication.It is simple to argue against the claim that information and communication technologies provide a lethal danger to classic totalitarian political regimes, which are dependent on the centralized management of all information and communication within a certain region.

These technologies cannot be used to centrally record and control every individual activity of small-scale manufacturing and large-scale distribution across any boundary. After the widespread adoption of PCs, diskettes, fax machines, and other modern audiovisual technology, no classic authoritarian state can continue to rule. However, since this new technology makes it possible for central administration, surveillance, and control, numerous new forms of government with a dictatorial bent are feasible. Since the terrorist assault on the World Trade Center and other US targets on September 11, 2001, several countries have increased monitoring for ostensible security reasons. One should give up the notion that they need direct supervision or complete control over every stage of information generation and delivery if they are to really understand these new sorts of rules. Citizens, employees, or customers just need to cross one of the precisely selected lines that are electronically monitored by massive, networked networks of registration and monitoring before central political and economic authority may be exercised.

Direct supervision, whether technological or visual, is not the most effective way to monitor individuals and their actions. They provide a lot of space and freedom, but when a certain threshold is passed, a central control receives a red alarm. For further explanation of this gloomy viewpoint, see the conclusion.It is not surprising that there are divergent opinions on how ICT affects freedom, democracy, and organization given the difference shown in the preceding paragraph. ICT is seen as a technology of freedom by some because it expands people's freedom of choice and strengthens horizontal relationships among networks of businesses and people.

Others contend that because leaders in governments, public administrations, enterprises, and other groups influence the design and implementation of ICT, it is largely a technology of central registration, surveillance, and control. They are charged with using ICT to tighten their control on their companies and staff members.

Before I go into this ideological debate, I want to focus on the real changes in governments and public agencies. It's possible to chart this evolution. A thorough model of the political system might include the relationships between every player participating in politics in the broadest sense. In the preceding section, networks inside and between businesses were used to depict how the infrastructure of the network society was manifesting itself in the economy. Government is increasingly molded by networks, as shown by Goldsmith and Eggers. Even politics in general is structured like a network. All interactions between the various political actorsnational, regional, and local governments, parliaments, public administrations, political parties and organizations in civil society, international organizations, judicial bodies, public institutions, corporations, and individual citizenscan be seen as both political interactions and interactions involving information and communication.

These relationships are becoming more organized and shaped through media networks and their applications. a political system model that may illustrate how certain relationships and people rise to prominence while others fade away or become incidental.I came to the conclusion that ICT facilitates both a concentration and a diffusion of politics in one of the chapters of the book Digital Democracy. The use of ICT strengthens existing centrifugal forces in the political system because, at its core, institutional political forces must cede some of their authority to international organizations, national businesses, legal institutions, privatized agencies, as well as to individuals and corporations that are keenly aware of and act in accordance with their own interests. They may establish their own relationships for information and communication as well as domains of influence and administration with the help of a public network. As a result, they are able to create their own politics and forgo the government's coordination functions in a particular region. A computer network has no borders, unlike a state.

On the other hand, networks allow initiatives by governments and public agencies to completely register the people. Additionally, since civil employees are in charge of the government's information networks, they support the influence of these individuals over parliaments. ICT therefore assists political concentration efforts. One of the first sectors to widely adopt ICTs is the public sector, including government departments. It is clear that they exploit this technology for their own core functions of administration, coordination, and taxation rather than to enhance the participation of people and parliaments.The analysis of those who believe a powerful government with complete registration and control will eventually emerge, however, is just as biased as the analysis of those who believe the state would eventually wither away or even collapse into virtual connections and horizontal sorts of organization forming on the Internet. Frissen has seen the emergence of a virtual state and the marginalization of conventional politics. Guéhenno has similarly predicted the demise of politics and democracy.

According to him, they will be replaced by a system of unofficial links and networks without a central authority because, in the era of networks, the connections that people create outside of the body politic compete with the relationships that people have with it. Politics is far from being the

primary force behind the organization of human existence and society. rather, it looks to be a secondary endeavor, a man-made construct that is no longer capable of resolving real-world issues in light of global change[4][6].

Given that networks consist of centers and nodes as well as links, both conceptions are one-sided. They don't float in the air either. They link real people who have bodies to real resources. In a network society, networks increasingly link and coordinate society's members rather than replacing it. Therefore, one of the most powerful players in society is still the state. As a result, politics and democracy, which essentially function at the societal level, are not doomed. According to Slaughter, the state is not dissolving but rather breaking apart into its individual institutions and networks. However, political and democratic forces outside of institutional politics must support or correct the state, politics, and democracy, among other things with the use of ICT.

DISCUSSION

ICT and the socialization of politics

It has been shown by writers like Guéhenno and Mowshowitz that the advancement of ICT is not always in the best interests of democracy. It's possible that less democratic or even undemocratic forces may gain control. In addition, one's perception of democracy will determine how beneficial an impact ICT is seen to have on democracy. There are at least six different perspectives on democracy in this area. Held refers to the first five as examples of democracy. Their followers seem to have varying ideas regarding how ICT should be used in politics.The first two theories of democracy lead to the reinforcement of institutional politics, the core of the political system, via the use of ICT. Institutional politics have found themselves in a precarious situation as a result of the growth of politics and the disintegration of the national state in comparison to other national forces. ICT will only make matters worse. However, the most powerful political forces in Western democracies are fighting back by bolstering state positions using ICT. They have an excuse to give security concerns first priority and to establish a powerful state thanks to the so-called 9/11 assaults and subsequent terrorist strikes.

Legalist democracy, often known as a so-called procedural view of democracy, which sees the constitution and other laws and regulations as the basis of democracy, is the traditional western theory of government that supports this action. Separation of powers, a system of checks and balances between the government, the public administration, and the court, and a- tion are the three fundamental concepts. According to this perspective, the most significant issue that has to be resolved with the use of ICT at the moment is the state's lack of information collection. ICT must thus result in better government administration, a stronger state, and increased security. Furthermore, by providing more and better information in both directions, it may serve to increase public support for the government and the administration.Competitive democracy is the name given to the second definition of democracy. The majority of nations with a two-party or presidential system favor it. This fairly elitist interpretation of democracy places an emphasis on leaders' representation and effective decision-making. Election and information campaigns make up the majority of ICT usage. This usage of ICT has garnered a lot of experience in the United

States. Telepolling and public information systems may aid voters in selecting the best candidates and policies.

The strategic direction of the other four conceptions of democracy is entirely different. These viewpoints' proponents strive for the socialization of politics, or the greater spread of politics across the whole system. This suggests that social institutions and individual people will play a bigger role in society. It is assumed that ICT will give people the power to directly affect politics, even to sidestep or replace institutional politics with their own political relationships. Their relationships may be formed in this manner. These alternative viewpoints are maintained by several social groups and intellectuals, in contrast to ideas intended to reinforce institutional politics, which are often backed by politicians and administrators.Plebiscitary democracy is the most extreme stance on current political practice. This point of view contends that plebiscites or referenda must be used to decide political issues. This suggests that direct democracy is preferred than representative democracy. The ability to conduct telepolls, telereferenda, and have electronic conversations made available by ICT immediately appealed to many who embrace this point of view.

Direct democracy as it was practiced in the Athenian agora is claimed to be revived by them. The term teledemocracy has been used to describe a situation in which individuals and social groups may use ICT to directly influence political decisions being made at a distance. On the possibilities and restrictions, see Arterton, Becker, Slaton, Barber, and van Dijk.Pluralist democracy is another alternate viewpoint. This viewpoint emphasizes the importance of opinion formation inside and between social groups. Democracy is a coalition of minority that is continually shifting. it is not the will of the majority. Pluralism in social and political discourse as well as in the media is its most significant virtue. Since ation is used by social groups as well as politicians, it combines direct and ative democracy. ICT provides several options for plurality in public discourse, including Internet debates, as well as in social organization conversations, for instance by utilizing an intranet.

Participatory democracy is the sixth perspective mentioned here. Its proponents push for the socialization of politics and encourage civic engagement. The focus is on forming opinions about political issues as broadly as possible and on a specific mix of direct and participative democracy. Public discussions, public education, and broad citizen engagement are its most crucial tools. Accessibility for everybody is essential if new media are to enable these tools in a beneficial way.Among the early adopters of the Internet community, the final democratic viewpoint has emerged as the preeminent one. This does not necessarily imply that the political beliefs driving it are wholly novel. The radical social movements of the 1960s and 1970s in most western nations were closely associated with the Internet pioneers, as many observers have noted.

From traditional anarchist and left-wing socialism to various forms of libertarianism, these viewpoints are represented. In the 1990s, the latter are the most significant. Given the options for community, tele-polling, and teleconversation, the libertarian perspective is similar to the pluralist and plebiscitarian perspectives in a number of ways. The focus on autonomous politics by individuals in their own associations utilizing the horizontal communication possibilities of ICT in general and the Internet in particular is unique to libertarianism. through its most extreme

manifestation, institutional politics is believed to be outmoded and to have been replaced by a new political reality that has been jointly produced through networks. According to this perspective, the fundamental issue that has to be resolved is that institutional politics is so centralist, bureaucratic, and backward that it falls short of expectations and is unable to address the most pressing issues facing contemporary society. A hybrid country with a free market economy and Internet democracy will take its place[7][9].The libertarian model is suggested to have both a substantive and procedural view of democracy, and to be considerably closer to direct than to ative democracy by the preference for Internet applications such electronic discussion, virtual community development, and telepolling.

E-Government and Digital Democracy Claims

New ideas, views, and assertions about government, administration, and political ation have been sparked by the possible uses of ICT in government, public administration, and the legislative process of ation. Digital democracy and e-government are the most well-liked ideas. According to my definition, e-government includes all information processing, communication, and transactional activities related to governmental functions that are carried out via a specific ICT application. I think the idea of digital democracy is more expansive. It may be described as an effort to use digital tools in addition to, not as a substitute for, conventional analogue political processes in order to conduct democracy without restrictions imposed by time, location, and other physical factors. Any one of the six perspectives outlined above may be used to understand democracy.

In the 1990s, e-government and digital democracy were seen as having promising potential. Many observers believed that an entirely new kind of internet-mediated democracy and governance was on the horizon. The undemocratic authority of governments and public administrations will only grow, according to pessimists, as a result of ICTs' ability for registration and control. They believed that since information technology was seen as being unappealing, challenging, and costly, there would be less engagement in political processes overall. I have adopted a skeptic's stance in this discussion: there are potential and hazards. let's wait and see.It's time to find a first equilibrium after 15 to 20 years of experience with e-government and digital democracy. I'll demonstrate this by contrasting the assertions made by supporters in the 1990s with the outcomes that we could see. Authors like Arterton and Abrahamson et al. made the assertions initially and examined them. These assertions were made by three ardent proponents of digital democracy towards the end of the 1990s: Bryan, Tsagarousianou, and Tambini. Their set of principles for digital democracy also applies to e-government:

1. The retrieval and interchange of political information between governments, public agencies, atives, political and community groups, and individual individuals is improved through digital democracy and e-government.
2. Electronic governance and digital democracy foster public discourse, deliberation, and community building.
3. Digital democracy and e-government increase the level of public involvement in political decision-making.

At the time of writing, considerably improved political and governmental information provision, retrieval, and interchange represent digital democracy's and e-government's greatest accomplishment. The public has access to a vast amount of pertinent information thanks to the new media. When individuals acquire the necessary abilities, they are no longer reliant on the conventional preprogrammed government and mass media supply and are free to choose for themselves from this corpus of information. Of course, journalists and other information brokers have gained the most from these chances, but with the help of certain tools like search engines and specialized software, suitably educated and experienced internet users may also accomplish this.

In nations with strong Internet penetration, almost every local, regional, and national government and their public agencies, as well as virtually all political parties, citizen organizations, and political pressure groups, now provide websites with political and other public information. Some of them are search portals that provide more advanced possibilities for looking for certain files or bits of information. Others are connected to sophisticated public information systems with political and governmental data bases.

Election parties and candidates provide campaign websites, which are more influential than television and the press with each passing election. The Internet has begun to overtake traditional media with younger voters, yet television still has a significant political advantage.With s that include political news and official documents that aren't released in their normal editions, the mass media expand the content of online newspapers, journals, and television channels. Organizations of citizens, voters, and pressure organizations offer their own unbiased online information sources and search tools, including election voter guides.Citizens and voters may become far more informed than they previously were in this fashion. They may also develop their own political information and respond to these online sources through email and web posts. A strong democracy and a functioning government need accessible, trustworthy, and accurate information. It is not, in my opinion, a necessary prerequisite. The prerequisites for this success story are many. Prior to having any influence on decision-making, information retrieval involves a number of procedures. Numerous data sources must be culled through and their information analyzed.

The outcome of these mental processes is unpredictable and greatly dependent on personal preferences and ability levels.What is really done with the information is the next point of discussion. Are there any political implications to it? Motivation and adaptability are issues here. After all, in a democracy, the impact of prospective action on actual decision-making critically depends on the power dynamics in the political system and in the media. It does not follow that more knowledge improves democracy after the decision-making stage has been reached. John Street argues that just gathering more data won't always result in better conclusions. All choices eventually come down to judgment, and too much information might actually make it difficult to exercise good judgment. Psychologists are aware that individuals make judgments based on a limited number of criteria and bits of factual information that are processed simultaneously in their minds, as well as wants, emotions, conventions, and values.

Another criticism is that although politics and government may seem more personable to residents and voters, they are not really more approachable. It is simple to send an email to the

president, but there is little likelihood that he or his deputies will read it. In reality, political parties and governments often utilize the new media as a buffer. According to research, they portray themselves in more or less transparent ways on websites, and they permit and handle citizen and voter criticism extremely differently. Government and political websites virtually ever make advantage of the Internet's potential for interaction.The volume and speed of political and governmental information transmitted on the Internet determines a final qualification. The political system of government and organization is under significant strain since both quantity and speed are at such high levels. Who is qualified to evaluate the accuracy of the vast array of claims, queries, rumors, and allegations made on the Internet? The bar for information sharing on the Internet is quite low. Additionally, since political news rotates so quickly on this network, hypes and so-called cyber-cascades of rumors, scandals, and public outbursts increasingly predominate the political news. Politicians and government representatives are compelled to move quickly and perhaps less wisely than they would if they had time to educate themselves, consult others, and consider the situation.

The second fundamental argument for digital democracy is that the important knowledge generated through electronic discussions held in newsgroups and online forums or communities may have a higher chance of being put into practice and leading to well-informed decision-making. This assertion is supported by the new media's ability to be interactive. Unfortunately, a lot of observers, like Jankowski and van Selm, Norris and Rojo, and Ragsdale, have found that the interaction between equals in online discussions is lacking. The discussions they examined lacked lengthy exchanges between participants. The majority of individuals seemed to just read the contributions of others and not make any of their own. Political representatives were often addressed when they did. Debate was often controlled by a small group of people. Finally, compared to in-person talks, there was less pressure to achieve a resolution in internet arguments, much alone a consensus. There were only feeble efforts to address a concern that was felt by everybody.

However, this does not imply that all justifications for the advantages of online discussions are invalid. These conversations' caliber and equality present very important issues. However, the variety of contributions and reciprocity among donors are encouraging. There are tens of thousands of political news groups and discussion lists on the Internet, so it would be impossible to account for their great popularity otherwise. They aren't just exhaust valves, though. The sharing of ideas must have some impact on the participants' political online and offline behavior as well as their level of political consciousness. Political communities are created and preserved in this manner. Without a doubt, significant portions of all future public spaces and communities will be covered by electronic arguments. The main issue, however, is that at the time this article was written, there was no discernible impact of discussion on institutional politics decision-making. We now address the third assertion of digital democracy.

The Internet is not involving more people in politics, despite what many people believed in the 1990s. It does, however, provide a platform for extra political activities that are more challenging to carry out in the offline world: more chances to gather political information and foster political discussion. Examples that everyone is familiar with include engaging in online surveys and discussions as well as sending and receiving email from the government, candidates, and others.

Searching for information on political parties or candidates, their voting patterns, and elections and political news is by far the most frequent activity. Information is considerably more well-liked than internet debate and activism.Between a tenth and a fifth of Internet users in the United States and most other nations with statistics on political uses of the Internet seemed to be involved in some type of online political action toward the end of the 1990s. Online users who access political news and information are growing in number.

It increased to 46 million or 39.4% of the internet population in the US in 2002. In the 2002 elections, 2 million of the roughly 7 million Dutch voters in the Netherlands used the electronic voting tool called Stemwijzer. However, individuals who are already politically active and those with higher levels of education are considerably more likely to utilize these new methods of gathering and engaging in political information than those who are less active and have lower levels of education. The lone exception is a segment of the younger generation that, while in many western nations throughout the 1980s and 1990s, was less politically active, but has since become interested in politics due to the habit of online surfing.Therefore, although the political elite benefits from the new media options of participation, the majority of the populace that is little to moderately interested in politics does not. The previously politically active are given a new potent instrument that strengthens their involvement and increases their ability to influence politics. Politically engaged Internet users and those who use computers are gradually becoming more informed than those who only read newspapers or watch TV. Additionally, people may have greater influence by engaging in online discussion forums and sending emails to public officials and legislators. On the other hand, those who have access to the Internet but lack the necessary will to engage in political activity won't suddenly start becoming more interested. Technology cannot make up for a fundamental lack of political drive.

Another fundamental tenet of digital democracy in the 1990s was that electronic polls, electronic referenda, and electronic voting would usher in a period of direct democracy that would modernize the Athenian agora's tradition of public engagement. Most supporters of a plebisci-tary and libertarian democracy are in favor of this viewpoint. The evidence suggests, however, that widespread Internet engagement in online forums, surveys, communities, and pressure organizations may thrive without having any impact on how official politics are decided. The ative system receives little attention. Face-to-face political communication, the press, and television continue to have far more influence.When the age of Internet or network politics really makes a breakthrough, this will likely alter in the future. The influence of electronic voting, referendums, and polls will thereafter increase. They will exert increasing strain on the established ative system.

On this subject, some political theorists contend that, with the aid of ICT, a system of direct democracy will replace the system of political representation. Sadly, a direct democracy system, whether digital or not, oversimplifies the complexities of modern political institutions and the people they are meant to serve. Perhaps the outcomes of all those computerized polls and referendums will be inconclusive, making political choices even more challenging. They could instead establish a simplified marketplace for ideas, candidates, and votes as opposed to a useful venue for debate and deliberation that weighs increasingly complicated concerns.My personal prediction is that the expansion of political and computer networking as well as the increasing

usage of ICTs will usher in a variety of tools that might directly affect individuals' democratic opinions in political systems that attempt to integrate them more or less effectively. As they do now, many political systems and cultures may combine direct and participative democratic styles of government in the future[10][12].

CONCLUSION

Creating comprehensive strategies for risk reduction, resilience-building, and inclusive development requires an understanding of and attention to the factors that increase vulnerability. Focus should be placed on advancing social fairness, expanding access to healthcare and education, bolstering governance frameworks, encouraging environmentally sound behavior, and boosting digital literacy and cybersecurity. Societies may promote resilience, safeguard vulnerable groups, and endeavor to build more just and sustainable futures by addressing these traits. The development of technology adds a new level of risk. Technology has a lot of advantages, but it may also introduce new dangers and weaknesses. Vulnerability in the digital sphere is increased by rapid technological progress, the digital divide, privacy issues, and cyber-attacks. Dependence on sophisticated technical systems may expose people, businesses, and whole communities to data breaches, technological failures, and exploitation of personal data.

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POWER IN THE ORGANIZATION: MODERNIZING BUREAUCRACY

Padmavathi S*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- padmavathi.s@presidencyuniversity.in

ABSTRACT:

Power is a fundamental concept in organizational dynamics, influencing decision-making, resource allocation, and relationships within the workplace. This chapter explores the nature and manifestations of power in organizations, highlighting its sources, dynamics, and implications. It delves into different types of power, including formal authority, expert power, and social power, and examines the complexities and potential tensions that arise from power dynamics within organizational settings.Formal authority is one of the most recognizable forms of power within organizations, typically conferred through hierarchical positions and organizational structures. Individuals in formal positions of authority possess the power to make decisions, allocate resources, and enforce compliance. This power is derived from the organization's structure and official roles, but its effectiveness depends on the legitimacy and acceptance by those being influenced.

KEYWORDS: *Authority, Centralization, Coercion, Decentralization, Delegation, Empowerment.*

INTRODUCTION

The preceding discussed how networks may be utilized to alter a company organization's superstructure. They ended up being in favor of combining decentralized production and execution with consolidating power, money, and control. The emergence of networks also fundamentally alters the organizational structure. Here, I'm referring to management-related changes. I previously discussed how bureaucracy ended up being a barrier for organizations rather than an innovation. ICT may assist in removing this barrier by updating bureaucracy. Max Weber identified five characteristics of bureaucracy: a hierarchy of authority. centralized decision-making. formalized norms. job specialization. and action uniformity.These characteristics do not vanish when ICT is used. They are, nevertheless, included into this technology. Frissen has shown how closely bureaucracy and ICT are related. For three of the previously stated traits, this is clear. ICT provides a lot more chances than the previous methods offered for formalizing rules, specializing duties, and standardizing activities. Traditional processes are formalized when employing computers and networks by programming them in software or even hardware. It is important to reject informal solutions as much as feasible. People are held more rigorously to their assigned jobs than previously since they are aware that everything they do is recorded. Finally, considerable action standardization results from the use

of computers and networks. After all, before one can begin cooperating via networks, their utilization requires defined and precise protocols as well as careful fine-tuning[1][3].

For the first two traits stated, there is less of a clear connection between bureaucracy and ICT. Many believe that ICT flattens firms because network operations distribution necessitates less hierarchy and decision-making centralization. So, a more thorough description of these aspects is required.Zuurmond came to the conclusion that there was less hierarchy, centralization, formalization, and specialization in these services after doing research in a variety of Dutch social service departments. These organizations were 'flatter' in various ways. There was more collaboration on numerous levels. Less commonly, civil workers would write down each action. Their employment duties expanded for them. Even standardization, the sixth characteristic of bureaucracy, was modified. Civil personnel were permitted to make made-to-measure work within specific parameters. However, computerization severely constrained the amount of flexibility for this job. There were less possibilities for staff to make significant choices on their own than in the past. Zuurmond said emphatically that ICT increases organizational control while necessitating fewer conventional bureaucratic procedures:

Therefore, since information architecture can handle these things, an organization may develop more horizontal structures, remove hierarchical levels, cancel checks, and eliminate paper-devouring file guidance systems. Information systems, in particular, are taking over coordination and communication. Because very rigorous processes that were intended to direct these operations are permitted to disappear, management is no longer required to oversee this coordination and communication. They are now within the system. Thus, the majority of the duties associated with conventional management are now included in information systems. These systems are chosen and directed by modern management. The successor of bureaucracy, according to Zuurmond, is infocracy.

It appears counterintuitive to say that control over companies is growing while old hierarchical and bureaucratic processes are waning. What exactly does it mean? In a prior argument, I made the claim that networks incorporate horizontal and vertical forms of coordination and control. To further clarify, I wish to draw a separate line between the following components of an organization's infrastructure. The transition from bureaucracy to infocracy requires a structure of control, regulation, and information coordinating decision-making within and between organizational layers. This calls for an authority structure across several organizational layers, as well as a labor division strategy for allocating roles and responsibilities within the organization that call for coordination.Horizontal centralization the highest level of management assumes complete control. the most crucial choices are taken away from employees, who are now just responsible for directing the information network to support the creation of workable solutions.

Horizontal decentralization as information processing becomes more complicated, staff members are given greater control over how the organization is run, and the so-called line structure is less influential in favor of the technostructure.Vertical centralization by standardizing, formalizing, and becoming more regular, the highest layers of management remove choices away from the lower levels and even from lower-level personnel. ultimately, lines are shorter and certain middle management functions become redundant.Vertical decentralization enables the transfer of decision-making authority to the operational levels via standardization, formalization, and

growing routine. They also enable quick and adaptable responses to changes in the business's environment, which is advantageous in the market and in interactions between employees and clients or consumers.It's vital to remember that the development of networks has technically made all four inclinations possible. Which trend will prevail in an organization relies not just on the distribution of power within it but also on its size, nature, variety, and degree of computerization. Offices that up until recently had a low degree of automation might be anticipated to become more centralized. But the four aforementioned inclinations will most often be combined in organizations. The most probable combination will be horizontal and vertical decentralization inside a centralized framework since ICT networks obviously make this possible.

It is possible to see changes in organizational power structures more clearly. There is widespread agreement that the introduction of networks results in fewer hierarchical levels. Some of the coordinating responsibilities of the supervisory staff are transferred to the network itself. Network operations partially take the role of coordination and oversight. Instead of managing and supervising staff, the supervisors' only remaining task is to keep an eye on and maintain the network. To senior management, staff functionaries, and independent workers using computer programs, on the one hand, and lower and intermediate management, on the other, they must cede part of their control. Many individuals have concluded that companies are becoming flatter based on these patterns. However, this does not necessarily need to be the case. It would be more accurate to state that the top and bottom are becoming more and more 'thinned out'. The distance that communications must span is becoming shorter, yet the gap between authority and control[4][6].

DISCUSSION

Division of Labour and Coordination

Within organizations backed by computer networks, the division of labor may result in both increased specialization and task integration. As previously stated, ICT is most likely used for task integration. It is simpler to open several applications at one terminal. Additionally, task swaps are encouraged since it is simpler for one person to fill in for another or take over for a bit. The internal flexibility of the company will be improved with the aid of technology. From this perspective, we will see that tasks increase. Depending on the degree of authority, knowledge, and freedom of action afforded by the programs on offer, this may or may not result in task enrichment for the individual engaged. The standardization and computer programming of traditional craft or specialist knowledge often leads to task erosion when job division practices within organizations remain unaltered. Task expansion could be used as compensation.

However, the same network technology may result in task division that has never previously occurred in administrative and industrial organizations: tasks are standard- ized in programs that much more rigorously allocate them to certain roles. Whether this really occurs is controlled by the access registration on the computer system. The system 'itself' then decides if the required processes are followed.This whole situation demonstrates that network approaches are not power neutral. They clearly need to be designed, as in network architecture. So let's examine the technological choices for network architecture in more detail. The majority of these issues have

their answers primarily dictated by the network's technical topology and typology, which were built into and organized according to the OSI standard network layers.

Personal Autonomy and Confidentiality

We have now gotten to the individual level. The utilization of networks may have a significant impact on an individual's influence. Although their personal liberty and privacy may be compromised, individuals may employ the same strategies to defend themselves and broaden their range of options.We distinguish between personal autonomy and privacy. Private life is a right. It is a freedom enjoyed by people, not by organizations or groups. Personal autonomy is a quality of how people relate to one another. It establishes a person's chances to acquire and defend freedom. Personal power is synonymous with personal autonomy. Freedom in this context refers to the ability to choose and exercise control over one's own usage of ICT. Personal autonomy is a prerequisite for privacy. Any freedom of choice is constrained without an individual's general freedom. Consequently, we start by talking about privacy. The definition of privacy is given first. The risks to privacy posed by the usage of ICT are then examined. There is also a discourse on the ways that privacy may now be protected.

Definitions of Privacy

The idea of privacy is ambiguous and has numerous connotations. Because it is so elusive, many people are unaware of its significance. Expressions like privacy is the individual's right to determine whether and to what extent one is willing to expose oneself to others and privacy is the right to be left alone are common definitions. However, a scientifically justified definition must be founded on ideas and principles recognized in social science, history, or legal theory. The importance placed on privacy varies greatly in social and cultural contexts, according to historical and anthropological studies, however certain features of privacy may be universal. Barrington Moore came to the conclusion that the need for privacydefined as the desire to keep one's private behavior private, to occasionally be by oneself, and not to reveal certain beliefs and behaviors to a group or communityis a universal need. However, according to Moore, in historical reality this requirement is often overridden by rudimentary social structures and technology.

In this book, I want to say that the person is less important than sophisticated social structures and technological advancements at the start of the twenty-first century.Privacy is a unique freedom right according to legal philosophy. It is a right against interference with private affairs in this instance. Nabben and van de Luytgaarden even went so far as to refer to this right as the unalienable freedom that should not be ceded to a society or considered in relation to competing interests.One of the greatest definitions, in my opinion, was offered by social philosopher Holmes: Freedom from intrusion into areas of one's own life that one has not explicitly or implicitly opened to others. The geographical and informational components of privacy are clear in this definition as well as in many others. The concept of privacy refers to the geographical isolation of certain places, beginning with the body and its immediate surroundings, which are off limits. Additionally, the perception, registration, and disclosure of an individual's features and behavior are steps of information processing that often reoccur in definitions.

Following Westin, a difference between relational and informational privacy is often drawn. I retain this distinction and even add a third type: physical privacy, even though I contend that these two categories of privacy often overlap, especially in the setting of networks. The ultimate private region is really the body and its immediate physical surroundings. Rape is one of the worst potential invasions of privacy because of this, among other reasons.The right to deliberate closeness extends to physical privacy. This is true for the invio- lability of the body and the satisfaction of intimate human needs, which only permits the presence of a very limited number of other individuals or none at all. Perhaps you don't understand how this relates to ICT. However, there is growing convergence between biotechnology and information technology. The DNA information coding is the most significant connection between them. A registration of personal data is very necessary for the mapping of all human genes and for DNA testing. DNA will likely generate the most significant personal data in the future. With the use of ICT, which will also be utilized to correlate DNA data with other types of personal data, they will be documented[7][9].

So-called biometrics are a possible risk to bodily privacy. First and foremost, they are identification and entry checks. Additionally, analog and digital video cameras trespass into people's private, physical spaces. For instance, there are examples when companies have used cameras to store and analyze photos centrally to monitor whether workers spend an excessive amount of time visiting the restroom.Camera checks often have an impact on the right to selected contact, or relational privacy. This is about interactions and conduct in one's personal life at work, at home, when traveling, and in other less formal settings. A basic right to freedom is the ability to control one's own interpersonal interactions and behavior without interference from others. The use of communication networks and information technologies that track behavior and relationships remotely might jeopardize this privilege. Cameras in public spaces and electronic house arrest are two excellent instances of behavior registra- tion. Examples of the registration of relationships include the recording of digital telephone conversations and the monitoring of traffic between telephone numbers, electronic mailboxes, and Internet addresses.

Informational privacy, or the right to selective disclosure, is the last category of privacy. In a basic sense, this form of privacy predates both humanity and writing, but the development of ICT has made it much more pertinent. Information privacy refers to the control an individual has over his or her personal information and the information or decisions based on that information. Sadly, the idea of personal data has condensed existing ideas of privacy. The protection of personal data has taken the role of privacy protection, and in certain cases, it has even been transformed into the security of this data. For obvious reasons, informational privacy is the focus of this work, although the most significant connections to relational and physical privacy are considered to the greatest extent possible. I go into detail about how these three privacy kinds are combined. The terms traceability and transparency, for example, will be used to illustrate the intimate connection between relational, informational, and physical privacy.

Privacy Threats

The advent of networks poses a greater threat to all forms of privacy than any earlier stage of ICT development. The challenges to informational privacy are the most evident, but when the spatial and physical domains of human life are opened up, relational and bodily privacy are also

at peril.What frightens people the most is the threat of being able to track every move a user makes on a public network. As seen by the evolution of services throughout history, it may really turn into a threat. For instance, the evolution of financial services began with the circulation of coins and continued with payments made via checks and printed accounts until reaching electronic payment. Service providers have amassed a growing quantity of data on their customers along this path. In electronic transactions, the customer gets bank statements that provide the precise location, date, and type of each transaction. Similar transitions from cash to electronic registration are taking place in transaction services. Intelligent cash registers, point-of-sale terminals, road pricing, online orders, and reservations all provide more detailed and individualized consumer information. This is a fantastic chance for market research, promotion, and marketing. So-called tracking systems on the Internet keep track of every action users take while using information and chat services. Webmasters may track every visit to and click on their website if they so want. They may do this in two ways. First, records of each Internet action are preserved in log files.

Large sequences of numbers comprising information on the machine being used, the web browser being used, and the country from which it is coming make up these log files. A growing number of pieces of hardware and software, including word processing applications and processors, include serial numbers and even owner names. The user's email address is often included to this data. Log files are now collections of personal data thanks to this information. Without sophisticated software, their analysis would be very labor-intensive. As a result, a second method is often employed: the user is presented with an invisible cookie. Without the user's knowledge, a tiny file containing information about the site visitor is automatically produced, given back to the user's web browser, and kept on the hard drive. This specific site automatically retrieves the file each time a user accesses it. Consequently, a user profile is eventually formed. Users are completely unaware of all of this.

When completing various forms of surveys before to utilizing a certain service, consumers are often helpful. Unaware users are unaware that the user profile is truly completed by the questionnaire.Since registration and consulting services have a potent center that is hungry for personal information, it is evident that they pose the biggest threat to privacy. However, the privacy of decentralized communication is also at risk due to the growth of digital communication networks that use registration software. For instance, it's not difficult to tap someone else's email and read it. This threat comes from the registration center itself more often than from persons breaking into the facility. Managers, for instance, may want to read every email sent and received by their staff members, but more often than not, they're content to just monitor the websites and services they frequent. The potential for these checks rises as the central exchanges' participation in decentralized discussion expands. The length and cost of the connection, together with the sender and receiver's numbers, are always recorded in digital electronic exchanges and switches that are managed by software.

The usage of the subscriber's number in digital networks is the next point to think about since it is much more open. Calling line identification is particularly significant in this regard. Telephone displays display the caller's number. The most significant advantage in terms of privacy protection is the transfer of authority from the caller to the called. The caller has always had a

disproportionate amount of power throughout the contact process ever since the introduction of automated telephony. CLI makes it more difficult for callers to get away with making unwanted calls, such vulgar or false emergency calls.We now come to the dangers to relational privacy. All communications technology under pressure to be accessible at all times and locations. Mobile and cellular phones will take care of this if new features like follow-me switches, answering machines, and voice mail boxes do not. The overwhelming need for these services demonstrates how much society has adapted to constant contact, but it also makes each person traceable to the social fabric's deepest cracks and across all environments. Everywhere becomes into a communal area. It is become more difficult to avoid being reachable at any time or location. And even if one attempts and is successful in deploying blocking choices, the likelihood that one may need to defend oneself is rising.

Personal autonomy is under danger because of this. Our natural area for seclusion and alone is becoming less. Yet the effectiveness of communication has benefited from this area from the beginning. Being accessible at all times and locations will cause a significant rise in the amount of contact that will later seem unimportant.Computer networks not only provide private spaces in the home and automobile, but also create private spaces at work. When individuals are required to work at desktop computers or terminals, this is fixed to certain locations. In this instance, management may track the employee's spatial behavior in addition to his or her accomplishments. Free movement is recorded and monitored inside the department, within the building, and on the road. Every movement is traceable thanks to various passes and check cards. Overall, management and technology are increasingly making decisions about workers' rights to choose who they want to connect with, even at work. Some supervisors and businesses forbid workers from having any kind of privacy at work. In any event, personal space at work is becoming more communal.

The development of connections between data that would not be harmful if utilized independently poses the next danger to privacy. Information technology can build connections between and within files that include personal data in a variety of ways. The discussion begins with file relationships. The description of file relations, commonly referred to as linkages or couplings, follows.The majority of database files are made to generate connections between certain records and fields in a matrix. This results in information on people. The next stage is to develop databases to provide overviews of all entries and fields, or just a subset of them. As a result, strategic information is gathered on diverse groups of individuals, such as their purchase habits at various times of the day. The information may often be linked back to a specific person. Data from several sources are combined in one database and verified for accuracy to enable a business to use all these options. Data warehouses are collections of this data. It has developed a separate business to fill these warehouses with massive volumes of data for usage in many situations. In databases, accompanying search strategies are referred to as knowledge discovery.

The next phase is data mining, which involves taking information from data that is implicitly there but was previously unknown but may be useful. For this reason, a wide range of innovative search methods are created using a mix of artificial intelligence and statistics.Strategically significant information on people is produced with the use of data warehouses and data mining. Usually, none of the parties involved are aware of this. They leave their footprints everywhere,

such as when using credit cards, debit cards, chip cards, and reply forms, all while erroneously believing that their privacy would not be violated. Then, all of a sudden, the info that was scattered everywhere comes back to the individual in question. Numerous organizations reveal a remarkably broad understanding of a person and the ability to make decisionseven if they aren't always the best onesfor the customer, employee, or citizen. This information may lead to some extremely intriguing offers, but it can also result in rejection for a job interview, denial of a loan, or rejection of an income tax return.

The creation of linkages between data in several files, also known as file coupling, opens up more options. This procedure might range from simple comparisons to the actual coupling of files, making it possible to employ KDD's sophisticated search methods.It is possible to completely integrate two or more files into one file by combining them. A person's profile may be created with the use of this integration. These profiles are made using behavioral psychology and statistics to calculate the likelihood that a person with a certain set of characteristics would act in a particular way.In management and marketing information systems as well as personnel information systems, these profiles gain increasing sway. The separation between the source and the combined data is considerable in each of these systems. In reality, when data are combined, new data are produced, which these algorithms instantly perceive as information. Rarely is the individual concerned told about these modifications and new objectives. It has strategic knowledge. However, errors and false assumptions are simple to make.The difficulty of file combining and adaptation in networks causes a growing gap between the reality of people, the information about these persons, and the choices made as a result, and a corresponding decline in the impact of individuals on the whole process.File coupling and creating profiles are between files.

Protections for Privacy

Without safeguards, the development of networks poses a serious danger to people's privacy. To state this, one does not have to be paranoid. The individuals who govern politics and the business are plainly drawn to the applications that networks provide. This time around, I'm not even bringing up the possibility of a more or less totalitarian government emerging with access to a flawless infrastructure or the actual plausible growth of electronic monitoring after the September 11 terrorist attacks. The network phase of computerization, for the first time in history, largely confirms the perception of a big brother society, which is characterized by extensive traceability and controllability of the person. The distinction is that there are many little brothers involved in this situation rather than just one big brother. Additionally, we often deal with indirect traceability and control rather than direct observation through monitors and displays. Although absolutely invisible to the victims, this is at least as efficient and effective since it may be based on summary facts and information, allowing the victims to psychologically become used to constant surveillance or to stop caring about it.Thankfully, there are several techniques to safeguard privacy inside networks as well. They may be categorized into four groups:

1. Legal defense.

2. Consumer rejection of or involvement in the provision of novel services and methods, as well as producer adoption of rules of behavior.
3. Organizational and systemic protection.
4. Four technological options.
5. Weaknesses

The first two have gotten the most attention thus far. But in the near run, additional protection may be anticipated from 2 and 4 based on the research below.The other three types of protection must have the structure and support of legal privacy protection in media networks. Regrettably, legal protection is still woefully insufficient. Almost every nation in the world has a constitutional or a statutory right to privacy. The constitution, a special privacy statute, and common law are the three legal levels at which a nation may have privacy protection. For a number of reasons, the legal protection of privacy is insufficient, especially when it comes to networks.

First, there is a low degree of efficacy and progress in privacy regulation and law. Constitutions cover a lot of ground. They don't have any clear-cut, immediate practical ramifications. The Fourth Amendment, which is the relevant section of the US Constitution, is both wide and specific in that it exclusively protects against government invasion of an individual's private. However, privacy regulations are often highly detailed. For instance, the federal and state levels of the United States have passed an astounding number of privacy statutes. Because of this, privacy law is now completely fragmented, rendering it weak and only understandable by legal specialists. While the OECD and the Council of Europe have long-standing principles and recommendations, the EU has produced highly thorough and ambitious privacy laws. The extensive European privacy regulations, however, are challenging to put into reality since they need so much work and social support. Additionally, since personal data in networks is transported across borders with various jurisdictions and because the regulation has a very low statusit is often common law and civil law rather than criminal lawthe effectiveness of any privacy laws is dubious. So, privacy offenses seldom result in prosecution or punishment.

This leads to our second motivation. The right to privacy is not seen as an inalienable one for people. It is constantly compared to other rights and interests, particularly the freedom of information and speech of other people and the government's right to security. More often than not, other laws, as well as emergency or national security regulations, take precedence over privacy regulations.The fact that legal privacy protection currently primarily addresses informational privacy is its third flaw. It has to do with data security. The regions of relational and physical privacy, however, are being progressively invaded by ICT in general and media networks in particular. Applications like email, caller id, video surveillance with recorded storage, and other types of monitoring of Internet usage are as a consequence inadequately safeguarded. The same is true for bodily privacy, which might be jeopardized by new media-based biometric and DNA tests.

The biggest flaw in legislative privacy protection, as with so many regulations, is that it consistently lags behind technological advancement. In the 1980s, laws were passed with the

assumption that computer registration was a static process involving the production and consultation of fixed files under the control of controllers who could be recognized and informed of their legal responsibilities. It was established in the 1990s that registration in computer networks is a dynamic process that constantly collects, processes, edits, modifies, consults, uses, and transfers data. In adapting privacy laws, the European Directive of 1995 used this dynamic process as its major point of origin. New technical challenges soon followed, including encryption, divergent international standards, monitoring on the Internet, and the need for video registration. These issues are covered in detail in 6.Although legislation is still needed to provide guidance for self-regulation and avoid the rule of the jungle, the shortcomings in privacy legislation make the idea of self-regulation by people and interest groups more appealing. After all, self-regulation benefits the most powerful parties. Self-regulation comes in two flavors: individual and societal.

Individual self-regulation refers to the efforts made by ICT users to protect their own privacy by their own knowledge, deeds, and usage of technological tools such software filters and browsers to assist in negotiating their personal data with online service providers. These tools go under the names TRUSTe and the Platform for Privacy Preferences. They are accounted for in 6.Some less tech-savvy individuals simply refuse to enter their real identities and credit card details online or substitute bogus information. Numerous polls show that individual Internet users are becoming more concerned about their privacy. However, in actuality, these consumers also seem to be quite negligent about safeguarding their privacy when using Internet-based apps. Software tools that are available for email encryption, anonymous browsing, screening out websites with weak privacy protection, and getting rid of cookies and malware are seldom utilized. Maybe their application is too arduous or complex. However, simple refusals brought on by a lack of trust are more potent than one would anticipate.

It is one of the causes of the electronic commerce sector's underwhelming beginnings in the 1990s and the first decade of the twenty-first century. As a result, providing privacy assurances will rank among the top-quality criteria for network services. In an effort to persuade customers, several manufacturers have created their own codes of conduct and codes of good practice.To help individual users, societal self-regulation must often intervene. More and more, producers, employers, and public administrations are negotiating with consumer, user, trade union, and citizen organizations concerning the privacy terms of utilizing personal data in computer files and networks. Instead, then attempting to treat problems after they occur, they may be able to avoid overuse[5], [6], [10].

CONCLUSION

In conclusion, Organizational dynamics are fundamentally shaped by power, which influences relationships, decision-making, and how the workplace functions as a whole. Recognizing and comprehending the many types of power present in companies may help leaders negotiate power dynamics successfully and promote a more comprehensive knowledge of organizational dynamics. Organizations may use the potential of power to achieve great results and develop a more engaged and effective workforce by supporting inclusive policies, moral leadership, and a culture that empowers employees. Power relations in companies must be addressed with finesse. Power disparities may be lessened and a more inclusive and equitable work environment can be

created through encouraging openness, accountability, and participatory decision-making. Collaboration may be aided by cultivating a culture of trust, open communication, and shared ideals as well as by a more equitable allocation of authority.

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AN OVERVIEW ABOUT SECURITY, CONFIDENTIALITY AND PRIVACY

R Ravikumar*

*Associate Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- ravikumar.r@presidencyuniversity.in

ABSTRACT:

Security, confidentiality, and privacy are crucial concepts in the digital age, ensuring the protection of sensitive information, maintaining trust, and safeguarding individual rights. This chapter explores the interplay between security, confidentiality, and privacy, highlighting their definitions, importance, and challenges in the context of technology-driven environments.Security refers to the measures and practices implemented to protect systems, networks, and data from unauthorized access, breaches, or malicious activities. It encompasses both technical and organizational aspects, such as encryption, authentication, access controls, and incident response. Security measures are essential for safeguarding sensitive information, maintaining system integrity, and preventing unauthorized disclosure or alteration of data.

KEYWORDS: *Access Control, Authentication, Biometrics, Compliance, Cryptography, Data Encryption.*

INTRODUCTION

Trade unions and consumer organizations will produce earlier and better results - widely supported decisions in favor of or against specific solutions - than will legislation and technical or organizational measures of protection after they are allowed to participate in the design, construction, and introduction of networks. For instance, at the moment, the only way to halt or amend personnel evaluation and personnel information systemswhich often unduly harm privacyis via collective agreements between employers and trade unions or works councils, barring the unusual court ruling. Employee organizations may highlight how these methods may also have detrimental impacts on accomplishments, such as placing an excessive emphasis on output volume and encouraging various forms of informal resistance and evasion.

The argument that privacy is adequately secured by dependable personal data protection and privacy rules is often expressed. But by now, it ought to be obvious how exposed networks are. They just cannot be completely guarded. Security by itself cannot safeguard privacy, however. This is often seen as a collection of objective technological metrics in which social dynamics and conflicts of interest are irrelevant. Security, protection of secrecy, and protection of privacy are three phrases that are often used interchangeably in professional writing on this subject[1][3].Security is a prerequisite for protecting sensitive and private data, but it is not adequate in and of itself. The majority of focus has previously been on the system-technical and

physical security of networks, including measures like guarding, locking, and employing access cards, as well as the secure technological design of networks. Since cable connections cannot be protected if they are not composed of fiber-optic cables, this kind of security is practically by definition not failsafe. Additionally, it is still feasible to tap switches, nodes, and central exchanges while using connections using fiber-optic lines. Even worse, hacking access codes is the easiest and fastest technique to breach security rather than using connections and switches.

The need for organizational and procedural security has become louder since the late 1990s. For instance, specific bureaucrats are given access to files holding personal data while everyone else is prohibited from doing so. These processes are detailed in access-related situations and legislation. This form of security necessitates staff training that is very focused on security issues as well as the stimulation of an organizational structure where the protection of data, programs, and equipment is a point of special importance in day-to-day operations.Privacy and confidentiality are not the same thing. Contrary to confidentiality, which is more appropriate for groups or organizations, privacy is best left to individuals. When registered users request access to the information system's working methods or the contents of their own files, they often encounter the defense that the methods and information are secret. When attempting to access the registers of the police and security services, for example, people who are registered may have almost no rights at all.

My conclusion is that more than just security and secrecy are needed to secure an individual's privacy. The procedures employed often fail to account for conflicts of interest, despite the fact that they are based on the power, interests, and labor divisions inside organizations. When reading specialized literature on technology and organizations, one might get the impression that the people in charge of maintaining and protecting a registerwho are frequently their own employeescannot themselves violate the privacy of the registeredas if the violators were automatically outsiders, i.e., criminals and unauthorized individuals. Self-regulation and legislation are essential for the preservation of privacy. It is necessary to balance the interests of the person or group of people against the interests of other individuals, groups, or organizations.

The greatest structural answer to the privacy issues could be to develop technology substitutes. In reality, since the 1990s, a tiny group of scientists and technologists have been diligently working on such alternatives. Their research is based on four alternative network characteristics: local control, terminal intelligence concentration, increased offline equipment, and privacy-enhancing technology. Local control refers to the creation of smaller networks, one for each company or department, that are able to safeguard their own personal data-containing files. More unregistered usage of computers is possible thanks to the concentration of intelligence in network terminals or independent workstations. Additionally, there is better privacy protection when using offline devices like chip cards or smart cards for personal registration as opposed to sizable internet databases. But since smart or chip cards are often only inserted into computer networks and their central registers, user management of these methods is still required. The fourth option, privacy-enhancing technology, seems to provide the best privacy protection. I'll now go more deeply into these technologies for this purpose.

The methods used to compromise privacy may equally be employed to defend it. The development of several methods to encrypt data and communication in networks occurred in the

1990s. More and more, privacy advocates see these privacy-enhancing technologies as their most crucial tools. However, that won't happen until it's been decided that the collection of personal information is indeed essential.The fundamental tenet of these strategies is the realization that the identity of the person is irrelevant to the majority of the registration procedure. During registration, individuals may get a pseudonymous identity in lieu of their actual identity. The steps that often follow one another in registration using ICT systems are as follows:Authorization comes first, followed by identification and authentication, access control, auditing, and accounting.

Encryption

The user's genuine identity is only required at the beginning and at the conclusion, according to a study by the Dutch and Canadian official data registrars. However, in every situation and throughout every stage of the process, each of them may be swapped out for a false identity that conceals the real one. For this, the following privacy strategies are used.The equivalent of a written signature in the digital age is a digital signature. Due to the unique combination of a private key known only to the owner and a public key known to the other party, such as a service provider, a digital signature cannot be replicated. The distributor, at the very least, is aware of the private key, thus it is not a kind of personal identifying number code. The user creates the private key from a distinct set of integers that are picked at random. When a procedure calls for an institution to identify a person, the private key and the public key are merged. Another key is in this combo. The legitimacy of the signature is confirmed when the combination is decoded by the relevant institution using the public key. It is not required to know who the signature genuinely belongs to at that stage of the procedure[4][6].

The digital pseudonym is the second method. Users may adopt a pseudonym authorizing them to get a specified quantity of services from service providers by utilizing the same combination as used for digital signatures. The whole sum is given to the suppliers. Every service and service provider may have a unique pseudonym. Thus, service providers are unable to register and share specific sales data.The aforementioned methods may be utilized whenever identity or authorisation is required, such as during a transaction or while using an electronic payment system. Both transfers and the contents of communications and transactions may be protected using them. In the latter scenario, they prevent anybody other than the addressee from accessing a message. These codes or encryptions, for example, were created for email. Email communications may be opened by others quite readily up until far into the 1990s. Phil Zimmermann's Pretty Good Privacy was one of the earliest methods for email encryption.

The American government prosecuted Zimmermann for his unauthorized transfer of defence technology. In actuality, the American government has been attempting for years to take control of the encryption distribution. In order to enable the police and intelligence agencies to decode for criminal investigations, it first required hardware makers to include a so-called clipper chip. Later, it directed that the Department of Justice get one copy of the key. Internet users who are both commercial and personal users have been outspoken in their opposition of these actions. After a few years, it was proposed that in Europe, the suggestions to provide the Ministry of Justice one key may instead be given to a reliable third party. Under tight guidelines, such as in the event of a formal judicial inquiry, this third party would be permitted to provide the Ministry

of Justice a copy of the key in order to decode communications from criminals, terrorists, racists, and child pornographers.The most recent encryption methods are quite difficult to trace and decipher. They may also be used to safeguard privacy. Some of them are steganographic in nature. By concealing a message in another message, the user is able to make it invisible. Texts, films, and audio sources that seem innocent may really carry illicit information hidden between the lines. The police and security agencies in this situation aren't even sure where to seek for them. The development of these new methods demonstrates that the government's preferred solutionsthe need to include chips and provide duplicate keysare really just rear-guard measures. Illegal communication in transit will become more and more difficult to intercept. The answer will eventually be to look for encrypted or concealed communications at the sender and the recipient of messages, where they are likely to vanish from the analog world and then emerge there. There must be a location where child pornographic photographs may be shot. On local computers, media, and printers, racist electronic remarks are compiled, saved, and printed. Criminal transactions and the theft of virtual currency will leave signs or trigger events in the real world.

The most crucial finding in regards to the four methods utilized to protect privacy is that none of them can be skipped. They rely on one another. Without the practice of self-regulation and data security, legislation will not be successful. Without a legal framework of enforceable rights, self-regulation and social protection, on the other hand, will be unconstrained and will encourage a culture of survival of the fittest. I've also argued that organizational and system-technical safeguards are a prerequisite for privacy protection but are not adequate. Finally, it is necessary to make the conclusion that technological solutions do not exist for every problem. Legislation, self-regulation, and management procedures all need to include them. The majority of solutions have two sides. They may both threaten and defend privacy. Criminals, the Ministry of Justice, and law-abiding individuals may all employ encryption. The link between the privacy protection strategies demonstrates once again that networks are not neutral technological tools. They are connected to power in society, in organizations, and amongst people in a variety of different ways.

DISCUSSION

Steganography

while we go from privacy to the personal liberty of people in the decisions they must make while interacting with networks, the previously drawn conclusion will become further clearer.Networks determine a system's personality. They link a number of terminals or end points. Human beings are now working, learning, and residing. The most basic problems about power in networks are raised by these few words. How much control do people, whether they be citizens, members of an organization, workers, customers, or consumers, have over whether they join the network or not, and how much say do they have over how the network is used once they are connected?The aforementioned queries center on how much control humans have over their technological tools. A network, however, cannot be likened to an equipment one chooses to buy. A network does not simply replace or streamline human interaction and communication. A medium having a system character is a network. It unites various machines with their human operators and simplifies their interactions.

To understand network technology, Kubicek and Rolf assert that a whole new strategy is required. The conventional method is based on a machine concept, where hardware and software are seen as separate, regionally or functionally limited instruments. It is possible to directly calculate and alter their effects. With network technology, this approach is no longer valid. There must be a system model to take its place. This model evaluates every node, connection, protocol, terminal, and program individually as well as how they interact in a system and, in particular, how they fit into current organizational and social processes. It turns out that the internal and external relationships of the whole business or other social unit will typically alter. Numerous businesses and governments have found that the network phase of automation necessitates more significant adjustments than the preceding stages, when only individual devices were deployed. It is more difficult to predict and assess the consequences. They often go where the organization hasn't yet gone. This can be the situation if the businesses are linked to a shared network. This renders this technology almost immaterial to works councils and other employee groups. Individuals are farther away from the locations where choices are made. They often see this technology as being exceedingly expansive, opaque, and ethereal. However, it seems from the list below that networks offer both advantages and disadvantages for individual liberty.

As citizens, people have entirely given up control over whether and how their political representatives and rulers would record information on their usage of networks. They will, at most, be granted access to and the ability to amend their data. Agents of the police and intelligence may turn their networks off from democratic supervision and disobey several privacy laws. However, people may utilize networks like the Internet to learn about their government, the public sector, and political candidates. Additionally, they are able to voice their own thoughts through televoting and online conversations.Employees must understand that their workspaces are a part of the firm network, perhaps eliminating whatever autonomy they previously had. Even if they tried, trade unions and other employee groups are unable to halt these important reforms. Typically, they are powerless and ignorant. Employers' atives are forced to specialize in topics they are unfamiliar with and, in some cases, to undergo total retraining due to the network's systemic nature and its dramatic ramifications for work and organization. Information systems for management and staff boost leaders' authority.

On the other hand, employees may utilize organizational networks for better and more powerful contact with their coworkers or for job extension and enrichment via vertical decentralization[7][9].Individuals merely have to accept that services are now provided and recorded electronically as customers of a business or government agency. After a brief transitional time, access will only be permitted with the entry of a pass and a PIN number. This enables the automated sharing of personal information on a far wider scale than ever before. Another effect is that traditional services, which rely on more or less informal processes of negotiation between individuals, will be replaced by electronic services, which operate under set, pre-programmed instructions and provide less space for discussion. On the other side, customers may contact government and commercial suppliers who provide multifunctional or one-stop services where all data and services are collected. Software that enables customers and consumers to evaluate the cost and quality of numerous sites for electronic commerce strengthens their position online.

Finally, people constantly feel pressured by a techno- gy push to purchase electronic goods. Customers seem to rule as long as the majority has not yet made a purchase. However, the prospective client of electronic services won't feel free to say no to them if theater performances and airplane trips are primarily or entirely purchased electronically. And once the great majority of people are linked, this ability to say no will likely be utterly lost. The main issue therefore becomes: Will analog and non-electrical methods continue to be available? Will people be required to purchase digital television sets and decoders, as in some other nations, to replace their outdated analogue equipment, for example?

Law

In the previous two sentences, we saw how the development and use of networks may alter the distribution of power at every level. The whole social structure becomes more exposed. The dangers are increasing. Computer networks are a very weak kind of technology. Additionally, liberty and equality may be under danger. Both governments that spy on people and criminals, terrorists, racists, or child pornographers may utilize and misuse networks. Since the law is a kind of authorized authority, we would anticipate that it would provide some protection. It is intended to control authority, or at the very least, to avoid abuses. The issue is that network technology is really undermining the law, especially current laws. Better protection is required. now, there is insufficient protection.

What happens offline should go online is the guiding premise when applying the law to networks. When technology is young, this sounds like a sound theory, but does it really manage to do justice to online reality? Many online behaviors combine public and private behavior to create a virtual environment. The current legal system struggles to understand this and provide answers that not only manage online behavior but also assist it in moving in the correct path. Who really controls the Internet is one of the first issues this answers. Is it the rule of law and governments, the public good, business interests, the online world, or network technology?The most significant legal concerns pertaining to social affairs in general and the network society in particular are covered in the sections that follow. They include the freedom of speech, the right to privacy, and the freedom of the press. With all of these rights, I shall inquire as to whether the protection provided by the law may be said to be enough. Self-regulation is becoming more popular because it can respond to new technological realities much more quickly than law can, and because it is acceptable for society with less governmental control than in the past. Another option is technological security, which includes warning systems, technical restrictions, and encryption. Which of these three protection strategies best protects rights and obligations?

Networks Undermine the Law

In practically every era in history, the law and justice have trailed behind new developments in technology. This makes sense since regulation cannot be applied to new technology until it has been accepted by society. In addition, the effects of new technology are not often immediately obvious. Because of this, a legal response often takes the form of a reaction or an alteration to established rules. The principle of civil law, according to which people first behave freely and the law then makes adjustments, enhances this nature in civil society. State planning would entail enacting legislation beforehand, such as to encourage or inhibit the development of a certain new

technology. With the concept of free initiative in technological growth in capitalist society, this notion does not suit well. Lawmaking in general and justice in particular are falling farther and further behind the advancement of microelectronic technology. Even the most fundamental concepts, such information, data, program, and communication, were not yet clearly defined and set in law as of 2005. The most effective defense against the abuse of these new technology is law. It was developed by judges, who sometimes have a tendency to simplify matters for themselves by just pronouncing that pre-existing legal terminology applies to modern technological reality.

The next phase of computerization is already underway before any phase has been addressed by law. More than any other technology before it, networks put the law to the test. There are at least seven primary reasons why this occurs.The intangible, geographically unrestricted, and constantly changing nature of information and communication in networks poses the first issue, as previous paragraphs have emphasized. In contrast, current law is predicated on legally discernible, locally applicable, and responsible legal entities and ownership titles. Information and proof must be, or must be able to be, recorded on a data carrier that yet resembles printed paper in some way.

Second, the issue of putting these laws into effect emerges when lawmakers have succeeded in creating and establishing new legislation for the use of networks. Networks are linked to one another and are not stopped by borders. This results in three major issuesperception of a legal infraction, an offense, or a crime actions in networks are opaque and difficult to track.Evidence of these actions is readily deleted, altered, or buried in networks.

prosecution: When there is international crime involved, jurisprudence varies among nations, and the accuser and the accused may be from separate jurisdictions. Third, the globalization of network technology has happened extremely swiftly. In contrast, laws are often national in scope, especially when it comes to the actual prosecution and punishment of crimes. General declarations and fundamental principles adopted by international organisations serve as the endpoints of international law. No matter how crucial these declarations and ideas are as a driving force behind international law, they lack any meaningful practical significance on their own. Furthermore, rather of providing real defense against the unintended effects of a new technology, they are typically used as pretexts for international political action and economic protectionism.

Fourth, the tangible reality of the industrial revolution, the first communications revolution, and even pre-industrial commerce and craft are still reflected in the laws that are now in place. This explains why there are still some legal debates over whether information is a commodity and if computer-mediated communication can be considered to be similar to a conversation. However, the network phase already represents the pinnacle of a microelectronics revolution that fostered the development of tertiary and quaternary services and subjected them to industrialization and rationalization processes. The network phase is also the foundation for a second communications revolution, as we have witnessed. Any attempt to regulate the effects of network technology is doomed to failure without a comprehensive definition of fundamental concepts like information, data, program, electronic communications, information service, file, owner, editor, controller, or processor, among others.

Fifth, current laws are still influenced by earlier stages of economic development, such as the monopolization and free-market periods, state regulation, and the start of globalization. A new economic reality is brought about by the global concentration of power and wealth, decentralization of production, development of a flow economy, and rapid expansion of the shadowy financial sector. It is difficult to regulate with current tools, and it cannot be done with current laws.Sixth, regulation at the start of the century was still dependent on fast advancing technology limitations. The ancient distinctions between tele-, data-, and mass communications, as well as between the many media within these forms of communications, are eliminated by network technology. For interconnected networks, separate laws is no longer sufficient. For instance, when cable TV information services first emerged decades ago, the rules governing the separation of press and broadcasting had already begun to lapse. Undoubtedly, a general framework for information and communication law is required. This will need to be based on much more chapter distinctions between information and communication, such as the information flow patterns covered in Section 1 and the network layers covered in Sections 2, 3, and 4.

The information traffic patterns, which are based on power dynamics and other fundamental rights in communication and information, might serve as a helpful starting point. For the overall structure needed, the network layers of a technological and an economic nature also provide helpful differences. They combined comparable operations that need to be governed similarly.Seventh, the majority of new law is characterized by patchwork amendments and inconsistent legal precedent. There is no comprehensive adjustment. Instead, intricate changes are made to current law, including soon-to-be-outdated technical terminology. The majority of them are to copyright, contract law, certification or authentication legislation, legal liability, and similar economic emergency regulations. The only significant non-economic regulation is found in certain countries' privacy laws and freedom of information laws. Fragmentary changes to the law are insufficient to control large-scale networks and their far-reaching effects on both people and society as a whole. Here, it is apparent that contemporary social and political discussions regarding new communication technologies have failed to come to any definitive conclusions. These conclusions are essential for any upcoming framework legislation, which will then be fleshed out in more detailed legislation and self-regulation.

In adopting present laws, the basic tenet for governments and other authorities is that laws that apply offline should also apply online. In the early phases of the development of a new technology, this looks to be an intelligent and practical idea. In fact, it has helped to close the fundamental gaps in the law that now exists on ICT. However, I do not believe it will be successful over time. The basic distinctions between offline and online contexts, including those covered in this book, are ignored by this conservative concept. Additionally, it doesn't take the unique issues that make up a network like the Internet seriously enough. The distinction between public and private is blurred in online environments, the responsibility for events that occur in these environments cannot be clearly attributed to technology or human effort, the division between collective and individual property rights in networks is not easily made, and many other characteristics of public and private networks are the source of fundamental differences. The distinctive hardware and software design of the Internet, with its network layers and codes, which are explained in the following, is the source of difficult-to-solve issues.

It is necessary to create new legislation that is based on fundamental legal principles in modern high-tech societies rather than particular technologies and their peculiarities in order to tackle the legal issues of the online environment in a genuinely fundamental manner. Legislators might draft framework legislation that addresses a wide variety of laws in order to incorporate these ideas. The constitution of a nation should be the primary source of reference since it encompasses the fundamental freedoms of expression, protection, and property rights, all of which must be balanced. Framework legislation is made up of political-legal papers that governments and parliaments propose rather than actual laws or articles of the law. Concrete laws may be created or amended after a nation adopts the framework[7], [8], [10].

CONCLUSION

In conclusion, In the digital age, when the protection of sensitive data and individual rights are vital, security, confidentiality, and privacy are crucial issues. The need to strike a balance between security requirements, confidentiality requirements, and privacy rights offers continual issues. To build a reliable and responsible digital environment, businesses and people must exercise caution, implement strong security measures, and abide by privacy laws. Building and sustaining trust in technology-driven society requires an educated and moral attitude to security, secrecy, and privacy.

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INFORMATION AND COMMUNICATION FREEDOM: MODERN SOCIETIES

Sarath A Pradeep*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-sarath.pradeep@presidencyuniversity.in

ABSTRACT:

Information and communication freedom is a fundamental principle in modern societies, encompassing the rights and freedoms of individuals to access, express, and disseminate information and ideas without censorship or undue restrictions. This chapter explores the significance and implications of information and communication freedom, highlighting its importance for democratic societies, the promotion of knowledge, and the protection of human rights.Information and communication freedom is crucial for the functioning of democratic societies as it enables the free flow of ideas, fosters public discourse, and empowers individuals to participate in decision-making processes. It ensures that citizens have access to a diverse range of information, opinions, and perspectives, allowing them to form informed opinions, engage in critical thinking, and hold those in power accountable.

KEYWORDS: *Censorship, Digital Rights, Encryption, Expression, Freedom Information, Internet Access.*

INTRODUCTION

States and politics are losing control, and this is happening at a time when we are facing new challenges. As has been said, law cannot keep up with economic and technological advancement.'Politics' falls under the same category. Due to three trends that emerged towards the close of the 20th century, nations are losing control over information policy both domestically and internationallygrowing international media networksthe expansion of a global market for multinational firms that operate independently and communicate via their own networks with little to no influence from global regulatory bodies.public products and services are now being privatized and deregulated.

This situation demonstrates that national governments have little power to regulate the Internet. This does not imply, however, that other players or tools are not in control of this network of networks. This demonstrates the strong competition for control of the Internet between governmental, corporate, technical, and self-regulatory forces. The Internet will be the subject of my attention since it is thought to be the most significant media network of the future.I'd want to start by contrasting the regulation of the Internet with that of more traditional media like television, the press, and telecoms. With the aid of the information flow patterns discussed in 1, McQuail and Windahl have contrasted the broadcasting model, the press model, and the

telecoms model of control of public media, among others. I want to introduce the Internet model of regulation to kick off the conversation about this. This suggests that Internet regulation is more like the press model and the telecommunications model than it is like the television model. The press model for public communication and the communications model for private communication are similar to how the Internet blends public and private communication. Broadcasting has always been subject to strict supervision. High degrees of regulation are present in both infrastructure and content. Governments and regulatory bodies have always had control over senders' access. In the past, the strong central role, the dearth of frequencies, and the need of certain cultural policies served as justifications for control. For instance, TV is seen as a penetrating visual medium with possible drawbacks like those brought on by violence in shows. Political censorship was the justification for broadcasting regulation in non-democratic regimes[1][3].

Because the dissemination of Internet information is equally as open as that of press media and because it is little subject to media regulation, the Internet seems to be a model of a reasonably free press. I'll discuss why media laws and governments can't effectively regulate online material later on in this essay. Contrary to popular belief, the Internet has strict infrastructure restrictions and access restrictions for users. The infrastructure of telecommunications and cable networks is highly controlled, and it supports the Internet. It must provide the same degree of security as telephone since it is used for private communication as well. Additionally, conditional access restricts the access that all users have to each service.The above-mentioned restrictions will enlarge. As broadband usage rises and television is incorporated into the Internet, strong centers will likewise emerge online. Governments and businesses will intensify their efforts to regulate every activity on this network. List all players and factors that have power over the Internet in order to comprehend this trend. Lawrence Lessig outlined four restrictions on all Internet activity in his book Code, and other Laws of Cyberspace the law, the standards of Internet organizational committees and user communities, the market, and the whole technical infrastructure of the Internet, which is referred to as code.

I'll use his list to respond to the query, Who controls the Internet? In the first decade of the twenty-first century, I will argue, power is transferring from the law and the online community to the market and technological standards, which are essentially neutral technologies and are both supported by new laws.Legislation only has a little direct influence on Internet activity for the reasons mentioned above. The examples provided here illustrate a variety of topics, including computer misuse, international property rights, privacy legislation, and legal aspects of freedom of information and communication. Control is often limited to national authorities. Governments must create worldwide accords to control how information and communication move across borders on the Internet. These seem to be challenging to establish, keep up, and put into practice. Governments are increasingly attempting to exercise indirect control by enlisting the aid of market participants including Internet service providers, gear manufacturers, and software companies. The majority of the new legislation targets these entities, such as ISPs that serve as surveyors for governments or that support the technology standards and security tools suggested by manufacturers.

Less democratic regimes attempt to restrict open Internet exchanges inside their own borders by directing ISPs to filter and ban dissenting websites and email messages, limiting access in public areas, and monitoring all interactions by security services. These endeavors, meanwhile, often fail miserably. A significant portion of Internet use eludes surveys.It is a common misconception that the Internet requires external oversight since it lacks a centralized administration. The American Departments of Defense and Commerce, who originated its design, operation, and structure, used the Internet first as a decen- tralized network for academics. Under the direction of these American departments, the pioneers of the Internet communityprimarily technologists and academicshave imposed Internet design, structure, and technical standards via self-regulation. The Internet Engineering Task Force is the most significant group. The TCP/IP protocol and associated standards are handled by this committee comprising more than 100 working groups. In theory, membership is available to all Internet users. The Internet Architecture Board, the organization's top body, nominates and appoints members based on their proven competence. The Internet Corporation for Assigned Names and Numbers, which chooses which domain names and IP addresses may be used and registers these domains globally, is the second-most significant organization. The Internet Society, established in 1992, is the third group and is meant to serve as the future government or United Nations of the whole Internet community. More than 150 national Internet Societies existed in 2004.

They are NGOs that accept membership from both individuals and organizations. The ISOC assists national governments on all policy elements of the Internet that relate to technological, legal, economic, and tax concerns[4][6].These self-regulatory organizations have the sole purpose of serving the Internet and its users. They primarily make technical choices in order to control the rapidly expanding use of this medium, to keep it operational, and to protect security. They have been increasingly ejected from the American departments' protection since the 1990s end.These self-regulatory organizations do not, however, make up the whole Internet community. Numerous newsgroups, online forums, virtual communities, peer-to-peer networks, and ordinary organizational web sites have a fairly high degree of control over their own material. Many members of these online communities, as well as their spokespersons and Internet ideologues, believed that the 1990s would usher in a new era of democracy in the media and society at large thanks to the Internet. It was seen as a danger when commercial interests and governmental regulations appeared on the Internet.

These interests and controls have since arrived and expanded their influence over the majority of Internet-related activity. The growth of e-commerce necessitates controlled access and secure payments. Governments desire to restrict the freedom of information, communication, privacy, and personal autonomy due to the rising number of illegal Internet abuses, both for the benefit of society as a whole and of business. Free downloads and copies of legally protected source material put pressure on organizations and governments to enact laws and use technology measures to safeguard intellectual property rights.However, while discussing the expanding market control of the Internet, emphasis should not be drawn primarily to these obvious efforts at corporate control that are supported by legislation. This would have to be the somewhat covert impact of the commercial services, hardware, and software developers, on this network. The most obvious influences are those of operating systems, web browsers, search engines, and

application software. They are not objective technological instruments. instead, each one significantly affects Internet activity and content.

The importance of Microsoft on the Internet can hardly be overstated. About 90% of Internet users use the operating system Windows, which is integrated with Microsoft's browser Internet Explorer. Microsoft's technical standards must be adhered to by all software developers and vendors. The unique qualities and rapidity of Microsoft's software development, especially for Windows and the email application Outlook, have a significant influence on the likelihood of computer hacking and the propagation of viruses. From a social and cultural perspective, it can be maintained that American office culture is replicated in Microsoft's office and operating system software. From the standpoint of unrestricted competition, Microsoft may favor its own supply of software that meets all requirements. As a result, there are countless legal cases filed all across the globe. In addition, it sparked the emergence of an open source movement that is attempting to reclaim control over the Internet and all other computer programs for both private and business users.

Search engines like Google and Yahoo are also not exactly impartial tools. By selecting and organizing the list of results to be shown, they favor the most popular websitesnot always the best. since a result, the most popular websites are growing in popularity. This usually indicates that they are also the most financially successful, since they can always afford to pay for first-page advertising. Because around 85% of visitors only scroll down to the first page, they have a big impact on how people search online and what they find.As companies become more involved in security management, the running of personal websites, and the completion of activities mandated by law, Internet access or service providers have expanded their effect on Internet behavior. These include duties include keeping track of all client traffic data for security services, filtering websites at customers' requests or censoring governments, and keeping an eye out for intellectual property rights violations. These duties expand even more with the switch to broadband services. The days of straightforward dial-up connections are over. Because of the increased external demands, this provides access and service providers greater freedom to implement their own rules and preferences[7][9].Producers of computer and network gear, as well as network operators like telecom and cable companies, are likewise exercising greater control than in the past. The Internet's patchwork of networks is becoming more exposed, necessitating a higher standard of technical security that is integrated into the hardware and managed by security software. With this observation, we have come upon the fourth mechanism for controlling the Internet.

The primary nervous system of this network determines its character, not the Internet's design, which is not a neutral communication infrastructure. The TCP/IP protocol, which allows the Internet's decentralized architecture of end-to-end communication and peer-to-peer networking, is its fundamental building block. All parties attempting to gain a greater level of control over the Internet oppose this architecture as its importance rises. Lawrence Lessig claims that there is a change in the source of authority for Internet regulation that flows from law to code, from sovereigns to software. He refers to the seemingly impartial technological standards and procedures that govern Internet activity as code. In actuality, all parties exploit these technological tools to increase their control over the Internet. These tools, however, are made up

of more than just code. at the bottom, they have specific hardware possibilities, and at the top, they have application software control. As an analytical tool, the OSI-model of network levels mentioned in 3 may be used to list each layer individually. Following this approach from the bottom to the top, I'll discuss the most crucial Internet control tools.

The hardware of terminals, routers, switchers, and central exchanges provide a variety of alternatives for connecting computers and other terminals as well as for gaining access to them and the network at the physical layer of networks. We are now moving into a new phase with a focus on terminal and network access devices. They most often consist of smart card gadgets and other ways to start computers with passwords. Devices that use biometrics will expand this. The potential for privacy, individual autonomy, and freedom on the Internet will be significantly impacted by the widespread use of these technology solutions.At the data connection layer, where computers may talk to one another because they share the same so-called frames, we find built-in protocols like ATM. Since it allows for considerably more centralized control than the current decentralized and hardware independent TCP/IP protocol, which is implemented on the two levels above the physical and data connection layers, this is a favorite tool of telecom corporations and local area network operators. These parties would adore switching from TCP/IP to any other protocol that offered greater centralized control, such as ATM.

The Internet as we know it, however, is the TCP/IP protocol at the network and transport levels. Without this protocol, it would not be feasible for people to communicate on the Internet relatively freely and perhaps anonymously. For instance, it serves as the foundation for email and all peer-to-peer networks that trade texts, music, and movies. This protocol adheres to the end-to-end principle: TCP is used to link IP addresses of computers and other terminals at each end by selecting the quickest and most effective path. It permits considerable intelligence in terminals but less intelligence inside the network.This circumstance will probably alter. The Internet's design incorporates elements of conventional telecom networks with centralized traffic management. Version 6 of the IP protocol, which offers significantly more intelligence and alternatives for centralized management, is now taking the place of Version 4 of the IP protocol. For instance, it includes IP Sec, which improves the encryption of Internet data stream packets and identifies them with numbers that enable operators and security organizations to recognize the packages, steer them, and monitor their senders and recipients. Since 2000, there have been passionate arguments in the IETF working groups on how to make this version fit with the end-to-end philosophy of the Internet. The outcome will have a significant impact on how the Internet functions going forward.

Currently, in order to regulate Internet traffic, corporations, governments, and other private interests must depend on the session layer's protocols. User identity and message authentication are made possible by these codes. The panels that ask for a user name and password for identification are familiar to any Internet user. A codification system using digital signatures and certifications with the optional usage of a Public Key Infrastructure has been developed to ensure the message's validity. Electronic payment and digital rights management systems have since been established, debiting users' and consumers' personal accounts. Users may see all of these codes at the session layer. The secret session codes found in log files and cookies are not covered

by this. They make it possible for organizations, authorities, service providers, and network managers to track any Internet activity.

Some businesses go one step further by using spyware, a program that stealthily collects user information from the Internet without the users' awareness. However, the user may utilize encryption at the presentation layer to conceal internet communications.Numerous additional examples of software controlling Internet usage may be addressed at the application layer. I'll just provide the technical choice made by Microsoft to give user names to files, such as word processing files, and the obligation imposed by Microsoft to register software as examples.When combined, these methods of technical Internet control are creating strong instruments. They might transform the Internet from a medium that is mostly free, open, and user-controlled into one that is used as a tool of corporate, governmental, and private control. Overall, the early government effort and Internet community control have given way to technology and market dominance of the Internet, supported by new laws.

DISCUSSION

Constitutions of democratic governments and more broad international declarations like the Declaration of Human Rights have established citizens' rights to information and freedom of speech. Most constitutions limit this freedom to the right to free speech by prohibiting government censorship. For instance, the First Amendment of the American constitution does not protect against private intervention. it only provides protection against interference by the government or a public institution carrying out a state function. The freedom to receive expressions should also be safeguarded, according to a reasonable conclusion. This legal concept is less evident in constitutions and declarations. There is no assurance in actuality since governing authorities, cable operators, and other service providers choose which channels, shows, and services may be accessed.It is crucial to note that the present legislative protections for freedom of information and communication only provide passive, not active, protection. Additionally, they primarily guard against government meddling rather than private activity invasions. fundamental implies that they do not address the violation of fundamental freedom in new media practices, such as the growth of information disparities or gatekeeping media monopolies. Other legislation and public information services need to address these issues[10][12].

The freedom of knowledge and communication is not an unqualified right, which is the second argument. When it comes to individual and state autonomy, the right to freedom of information and communication is not unqualified. A person's freedom of expression and right to reception stop when another person's right to privacy, security, identity, dignity, and personal property interests begin at the individual level. At the state level, a state's right to sovereignty, national security, public order, cultural identity, and economic interests collide with the right to completely free national information flow.Because of their inherent nature, these disputes can never be fully resolved. This is also reflected in the descriptions of communication and information freedom, which all exhibit at least some internal conflict. Jurists therefore use phrases like a free and balanced flow of information and everyone is free to as long as this does no while discussing the worldwide traffic of data. This implies that in law, values must be compared to one another. National law may take these factors into account. Internationally, law

has little impact, and international affirmations of human rights are too broad and contain too few severe penalties to be helpful. The main issue is that the freedom of information on international networks threatens the right to state autonomy. This right includes not only legal but also economic, political, military, and cultural dimensions, which are all discussed here.

First, transnational networks may be used to circumvent national laws in the legal area. They allow for not only very quick file transfers across nations but also a division of information processing tasks among the most beneficial nations, which are often the least expensive and controlled. Data are collected in one nation, modified and kept in another, disseminated and utilized as information in a third nation, evading taxes, ownership rights laws, and privacy laws. Some nations are already well-known for being data-free havens or paradises. One just chooses a nation where there are little or no penalties for a certain wrongdoing, or even a crime, and makes sure they have access to an international network.Second, since taxes are only levied on data carriers rather than the substance and creation of this data, which are often worth far more than the carriers, governments are losing out on money in the economic realm. There is no way to put gateways in place in every network where a border is crossed to act as a kind of customs. Brazil attempted to accomplish this in the past but quickly had to give up.

The major issue is not physical products purchased online. Once they are imported or delivered, they must'surface'. VAT and import charge may then be collected. On the other side, intangible services provide easier opportunities to cheat taxes.Third, a nation may be very interested in how information is used in politics. To ensure that they are not entirely reliant on others in times of disaster, the majority of nations desire to keep vital information maintained on their own soil. When the IMF or the World Bank proposes an austerity plan based on considerably more sophisticated processing of a nation's own data than it is capable of accomplishing itself, many developing countries with debts learn the value of the exclusive use a country has over its own data.Fourth, the political and military significance of a nation's information sovereignty are intertwined. Sharing sensitive information puts national security at risk. International information networks are also becoming increasingly significant as weapons.

The United States has taken the lead at this time. Anything else that exists in this sector is substantially inferior to the networks controlled by the Pentagon, the Central Intelligence Agency, and the National Security Agency. Network warfare has been used to describe the 2003 conflict in Iraq since the Coalition's ground troops were entirely controlled and assisted by satellites, planes, and rockets that were all connected to a single network system. Defense experts predict that network warfare or infowars will take front stage in future conflicts. Taking down networks will prove to be a decisive military move since they have grown so susceptible while also being so vital for a nation.Fifth, broadcasting satellites, international computer networks like the Internet, and the robust data-banks and databases of the wealthy western nations pose a severe danger to the cultural identities of impoverished or less developed countries and of closed communities.

Furthermore, a nation's autonomy shouldn't be unrestricted. This would be in opposition to the right of others to free knowledge as well as their own economic interests. Countries often make up justifications to mask their opposition. For instance, nations often cite the need to preserve their own culture and national sovereignty as justification for limiting the freedom of information

and communication for their own inhabitants. Pure economic protectionism sometimes conceals itself beneath assertions of technical, political, or legal sovereignty.Anyone looking to avoid punishment for violations of information and communication law may find sanctuary in the hasty and unregulated growth of new media, particularly the Internet. Governments, security agencies, regulating bodies, and a variety of interest groups are so distrustful of it. The actions of criminals, terrorists, liars, bigots, and pornographers are mostly under check in traditional media. How should the same behavior be regulated in the new media?

The aforementioned categories are among the Internet's frequent users. They obviously pose a danger to other people's freedom, security, and society as a whole. A rising body of opinion holds that the law ought to include both traditional and contemporary media, including the Internet as a public mass medium. What are the issues with this application, then? They include some essential ones. The most crucial are next.What is the nature of new media first? They are undergoing a process of convergence that is obfuscating many of the differences between the traditional media. Should the new media be modeled after the model of the press, the model of the common carrier, or the model of broadcasting? By the end of the 1990s, the press model for economic freedom and the common carrier or broadcasting model for social, cultural, and political freedoms in the new media environment had been widely accepted by most governments in the western world and east Asia. These countries work extremely hard to promote international electronic trade while also attempting to enact new restrictions or to enforce those that already exist on the social and cultural applications of the Internet[13][15].

CONCLUSION

In conclusion, Freedom of information and communication is a basic value that supports human rights, democratic societies, and knowledge society. They promote civic engagement, individual empowerment, and societal advancement. A multidimensional strategy that includes legislative frameworks, technical advancements, media literacy, and an educated and involved populace is needed to protect and promote information and communication freedom. For the creation of an inclusive, informed, and democratic information environment, it is crucial to work toward a balance between defending individual rights and resolving social issues.

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ADAPTATION OF LEGISLATION: LEGAL FRAMEWORKS

Rajesh Sisodia*

*Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-rajesh.sisodia@presidencyuniversity.in

ABSTRACT:

The adaptation of legislation is a critical process that enables legal frameworks to remain relevant, effective, and responsive to evolving societal needs and challenges. This chapter explores the concept of legislation adaptation, highlighting its significance, drivers, and implications in the context of changing social, economic, technological, and environmental landscapes.Legislation serves as the foundation of legal systems, governing various aspects of society, including governance, commerce, public health, and human rights. However, as societies evolve and circumstances change, existing laws may become outdated, inadequate, or insufficient to address emerging issues. Legislation adaptation involves the revision, modification, or creation of laws to better align with contemporary needs, promote justice, and support social progress.

KEYWORDS: *Amendments, Compliance, Enforcement, Evolving Regulations, Flexibility, Legislative.*

INTRODUCTION

The fact that numerous terminology for the old media are employed in laws and even in constitutions creates a dilemma when trying to apply contemporary legislation. 'Speech' and 'the press', for instance, are mentioned in the First Amendment. According to some legal professionals, new terminology or more inclusive language should be created for new media. Others contend that the ancient sayings are still accurate and simply need a more expansive interpretation.The second issue is that the new media make it difficult to distinguish between different types of media as well as different social realms of existence, particularly the line between public and private life. In sections 7 and 8, this blending of life's domains is examined. For new media laws, it has immediate repercussions. Both a mass-media and an interpersonal medium, the Internet. It is a mass media when it offers websites, and an intimate medium when it offers email. What about the growing number of Internet apps with both public and private features, such as chat rooms, sexy webcam services, electronic billboards, and multi-user dungeons? They function in between interpersonal and mass communications[1][3].

In mass and interpersonal communication, information and communication freedom have historically been governed by quite distinct laws. Obscenity, for example, may not be permitted in mass communication if it is permitted in private and personal communication. How should the various Internet apps be ranked is the question. Treating news and discussion forums, billboards,

open-access MUDs, and websites as forms of mass communication is not difficult. Even while there is often no legal need for email secrecy, private correspondence sent between people will almost certainly be considered as such. What about totally private email lists, sensual webcam sessions, chat rooms, or discussion forums? To define membership, accounts, passwords, and encryption as markers of the private or public nature of these apps, a significant number of norms and observable facts must be created.The very volatile, dynamic, and perhaps encrypted character of network communication across several borders and jurisdictions is the last issue to be raised here. This makes it incredibly difficult to track down, investigate, prosecute, and establish all types of illegal behavior, obscene, indecent, and defamatory utterances, breaches of human rights like privacy, and other offenses. The police and security organizations must devote a lot of effort to these tasks. Therefore, there is a low likelihood that someone will be charged with and found guilty even when an offense is discovered.

The three types of solutions to these issueslegal remedies, self-regulation, and technical safeguardsrecur often in the following s. One of the most crucial assertions of this is that they can only work together. otherwise, they are ineffective.Regardless matter how severe the aforementioned issues are, the adaptation of laws and other rules in the area of ICT is still required. For all of the more or less voluntary alternatives to be detailed below, it provides a legal foundation and protection. Due to the fact that the aforementioned technology and its applications in everyday life are still developing, this will take some time. However, after seeing the ostensibly anarchic nature of Internet usage, several countries have been terrified. They rushed through emergency legislation. The Communications Decency Act, which President Clinton enacted in 1996, is a prime example. Aiming to restrict access to and criminalize manifestations of violence and obscenity on cable TV, the Internet, and online computer services, this legislation was adopted. It subjected these media to stricter restrictions than those that apply to conventional media, such as the press and free-to-air TV. The U.S.

Supreme Court declared the statute to be unconstitutional only one year after it was passed. It is interesting to note that the court emphasized the First Amendment's protection of the freedom of inter-personal communication on the Internet, but the Decency Act largely categorized the Internet as a mass communication medium. East Asian countries have also imposed limitations on the freedom of speech on the Internet. Both the EU's Resolution on Illegal and Harmful Internet Content and its Directive on the Protection of Minors have made it necessary for the member states to modify their Internet-related legal frameworks.The emergency laws passed in the previous ten years have often resulted in worse limitations on the freedom of information and communication in the new internet world than in the old offline one. Generally speaking, this law supported market- or self-regulation of enterprises and service providers on the Internet as well as technical protective measures. ISPs were compelled to use rating systems to block websites and their contents or to keep and open the traffic data of their customers as a result. Built-in protection measures supported by the law have taken away the fair use rights that formerly applied to CDs, DVDs, and online services. The similar ancient media did not provide these options.

Spam, or the widespread publishing of unwanted online communications, is an infringement on Internet users' freedom of information and communication. After some time, legislation that aims

to stop this behavior was implemented. The federal CAN-SPAM Act of 2003 operates on the tenet that customers have the right to opt out of receiving unwanted messages in the United States. When recipients want it in return, spam senders are forced to quit. The Act forbids the use of fake headers and misleading subject lines in mails. Every communication must have a label. The stricter opt-in approach is implemented in the EU Spam Directive from 2002: unsolicited communications are only permitted with the recipients' prior consent. Other nations throughout the globe also decide between adopting laws based on opt-in or opt-out principles. The major issue, however, is the lack of upkeep and enforcement of anti-spam regulations. Therefore, increasingly common solutions include the self-regulation of codes of behavior by advertising agencies and other organizations as well as the technical safeguards provided by software providers and ISPs.

It is not surprising that the two other groups of solutionsself-regulation and technical alternativeshave gotten greater attention for the time being given the basic issues with the adaptability of law stated above. The authorities have addressed Internet and cable service providers about their alleged responsibility for monitoring and analyzing all data on their networks, urging some kind of self-regulation but really seeking to use them as a legal extension. In response, many of them claim that they are not the police. Like telephone companies, the majority of access providers claim to have no influence over the communications they transmit. They assert that they are neither cable program editors nor providers. The claims must be different for service providers that supply content, since there is increasing agreement that they are responsible for the information in their services.The access and service providers themselves advocate for self-regulation as the best course of action, providing standards of behavior and engaging in self-censorship by refusing to subscribe to subscribers, sites, programs, and files that may get them in legal trouble. They also create unique addresses that act as hotlines for their own customers to report instances of child pornography, racism, and other possible legal breaches.

By the 1990s' end, so-called rating and filtering systems had begun to take center stage as the key safeguards against dangerous and unlawful content on computer networks in the next decades. In actuality, these systems combine technology with self-regulation. Rating systems refer to either a self-rating by content producers or an evaluation by professional rating services that focus on certain types of material. A scale that is linked to a service or website that has to be rated and shown in browsers is used to score the quantity and quality of things like sex and violence. Therefore, whatever kind and degree of protection are desired by parents, educators, or indeed any other form of authority, the software of the filtering systems installed by the users themselves may provide it. They will be available for future users to pick as part of their personal data[4][6].The Platform of Internet Content Selection provided by the World Wide Web Consortium is the most well-known provider of rating systems. The meaningful titles Net Nanny, Cybersitter, Net Shepherd, Surf Watch, and Cyber Patrol were given to well-known filtering programs. Following the failure of the Decency Act and the issues they encountered in adapting and implementing law, the US government and the European Commission have increasingly come to rely on these solutions. Internet professionals like Esther Dyson firmly support them from a libertarian perspective. She advocates for self-regulation through rating and filtering systems as the most effective alternative to government control of the internet.

She anticipates that these systems will overtake other quality criteria as the most crucial for service providers. Unfortunately, she ignores any power dynamics in society and online by providing this assistance. Governments and other authorities may possibly impose strict requirements for the kind and caliber of these systems to be used. The governments of China, Vietnam, Cuba, Singapore, and other nations block websites on the Internet employing filter systems on a huge scale at the time of writing. In order to restrict the content accessible to their children, American parents have filed lawsuits demanding that schools install them on their networks. Furthermore, a variety of vested interests will likely have a say in the supply and design of grading and filtration systems. Minority concerns may lose prominence or be completely ignored. Therefore, changing the law is still required to safeguard everyone's right to knowledge and communication. These systems also have the drawback of being simple for the target population, particularly kids, to slip out from under. They just visit their friends, neighbors, or public areas with less robust screening. Or they'll utilize one of the numerous little mobile gadgets that will soon provide simple access to the Internet.

Still more efficient technological solutions are being sought after for these and other reasons. Some observers have a lot of hope in this. For instance, the American law scholar Reidenberg has suggested a Lex Informatica that would be able to use technological solutions like encryptions and other methods of protection to address most of the issues raised in this. In reality, grading and filtering systems may even be programmed into hardware. They are included in operating systems, search engines, and other applications. This option was foreshadowed by the introduction of the 'violence chip' in TV sets. 'Popular' approaches are becoming more prevalent, such as scrambling messages in programs or blocking them with some kind of coding. However, these technology solutions have advantages and disadvantages, much like self-regulation. They both defend and endanger the freedoms of information and communication. Although they are essential as answers, it is still crucial to modify the law in order to use them in a manner that is fair, just, and balanced.

DISCUSSION

Rights of Ownership

Freedom of information and communication clashes not just with restrictions on public speech and autonomy but also with ownership rights. Even more difficult to settle than the first disagreement is the second. On the one hand, a lot of individuals believe that knowledge is a societal good that shouldn't just be exploited by commercial interests. Information, on the other hand, has grown to be one of the most significant economic goods in the contemporary economy and should as a result be subject to the market economy's principles like any other commodity. This distinction may be deduced from four distinctive traits of knowledge as a product, a more or less fixed kind of information. The cost of producing knowledge is far higher than the cost of sharing and using it. Although knowledge is only ever created once, it is always useful. The utilization of networks strengthens this quality.

Every time information is created or employed, risks are made since there is never a guarantee that the outcomes will be beneficial. This is why government funding for scientific research is provided, and why a customer's reliance on a knowledge provider is essential.An intangible

product is knowledge. It cannot be transferred from one owner to another like a tangible item, giving the new owner the exclusive right to utilize it. Knowledge is shared, on the other hand. Knowledge is transferred and then held by both the sender and the recipient. It is possible for someone to 'acquire knowledge' without the producer losing any of his own. Networks also help to strengthen this trait.

Work done by both individuals and society results in knowledge. It is challenging to draw a distinction between them. Because of this, protecting individual accomplishments is a challenge with only transient answers. Networks emphasize this trait as well since they connect people and their contributions to social exchange. These four traits provide justifications for both the free distribution of information and the creation of knowledge as a property. The presence of networks undermines the first two reasons while bolstering the second two. The opportunities for sharing and replicating information are streamlined and expanded via networks. Numerous people may access knowledge through networks without it losing any of its quality or intellectual worth. Licensing agreements are used to transmit it more often to various users than tight sale or hiring agreements, which are used less frequently. Networks unquestionably contribute to the socialization of knowledge. Because of this, it is much more difficult to preserve the ownership of information shared across networks. Most of the available legal tools are flawed and ineffective.

The problem of knowledge's private appropriation in networks in particular and the socialization of knowledge explain why governments have made such great efforts to safeguard the billion-dollar interests of the copyright industry and modify the laws governing intellectual property rights. They often tighten it up much more than it was in the analog environment.The first kind of solution to the issue of securing intellectual and material property rights in the use of new media is legal adaptation. The others include technology solutions and market-based self-regulation or self-organization.Prior to talking about material property rights, let's address the issues surrounding intellectual property rights. Three fundamental components of intellectual property rights are the right to publish a work of original creative endeavor, the right to reproduce, and the right to distribute. We must acknowledge that although American and English laws often prioritize copyright, continental European laws prioritize protecting writers' rights. Because of this, the Dutch legislation is known as the Auteurswet, while the American statute is known as the Copyright Act.

The connection between publishing, replication, and distribution via computer networks is the most crucial aspect of intellectual property rights in new media. The procedure takes on a significant role. Making a website with hyperlinks and copyable files, for instance, obfuscates the lines between them. In light of this, the issue of which of the three rights mentioned above will be prioritized in future law emerges. Reproduction and distribution rights are expected to be upheld the most for historical and basic reasons related to the evolution of authors' rights in a digital environment, including the expansion of corporate power and privatization. Authors' rights, which serve as the guardians of creative work, will be jeopardized. In the context of a digital network, securing them presents some basic challenges.First off, the contentthat is, the facts and ideasthat are represented are not protected by authors' rights or copyright. rather, they merely protect the form of an idea, concept, technique, method of operation, or finding. The

cultural history of society is encountered in content, and it is impossible to determine precisely where this heritage stops and the creative expression of artists starts.

This was already a fundamental issue with works produced on analog medium. The following two factors make it seem as if the issue cannot be resolved through digital media. First off, material in digital contexts is always changing and quickly takes on a more public persona. Digital signs, which are relatively simple to modify, duplicate, and trade, lose the unmistakable creative content of the period of basic commodity production, which is plainly seen in paintings, sculptures, and books. Furthermore, changing the shape is also simple. Both creators and consumers are constantly adapting computer applications. Databanks provide summaries and chapters of forms and bits of information that are essentially automated. These factors make author's rights and copyright violations very difficult to establish[4][6].Second, all current intellectual property rules only safeguard fixed works, allowing for the duplication and proliferation of their originals. This starting point is unviable in the changing digital world of computer networks. Fixed forms will be replaced by the processes of creation, re-creation, and reproduction, as was previously claimed.

These basic issues suggest that any authors' rights that are purely focused on the defense of the distinctive originality of works of the mind would be rendered useless in digital contexts. The issue of computers writing computer programs on their own serves as a clear example. The proprietors of the relevant technology are given the rights to these programs. The additional or excess value of new computer programs, the new composition or reworking of data in databanks, or the creation of new information out of old data are examples of other scenarios. Judges and attorneys are talking more and more about protecting labor work rather than creative endeavor. Authors' rights go from a cultural to a commercial domain in this manner. Numerous individuals have failed to recognize this crucial development.

This transition from intellectual property to economic property continues with the use of software and information services. Here, the transition from a property right to a use right can be seen. Contracts of all types between manufacturers and commercial or residential consumers are becoming more significant. In these situations, one purchases a license to use the original rather than a duplicate of it.The above-mentioned major changes were reflected in the late 1990s intellectual property rights laws in both the United States and Europe. European approaches tended to follow the fundamental American economic assumptions about intellectual property rights. Both American and European ideas made an effort to adhere to digital technology's requirements. I'll contend, however, that they accomplished this with such enthusiasm and under the strong influence of economic interests that fundamental freedoms of knowledge and communication have been put in jeopardy.

The United States enacted the Digital Millennium Copyright Act in 1998. This Act provided copyright owners authority over every publishing, replication, and distribution of works in a digital form and expanded the existing Copyright Act to digital media. For instance, Internet service providers are required to delete content from users' websites that looks to violate copyright. Fair use rights, which are often connected to intellectual property rights and include personal use, use by libraries, and use in schools, are severely restricted to permit only licensed usage. In theory, it is also prohibited to duplicate music from bought CDs to create a personal

compilation or make copies of software for use on a second computer in the home. The so-called first-sale right of a book, for example, which grants the user the right to use and distribute the copy they have bought as long as doing so does not jeopardize the producer's financial interests, is also revoked. Therefore, many CDs and DVDs that are technically secured do not permit a single copy.

This Act supports encryption-based safeguards and so-called digital rights management systems to stop digital copying and trace every use of works that are protected. With a few rare circumstances, attempting to get around these technical fixes is now against the law. Online service providers are accountable for reporting these offenses and safeguarding pay-per-use policies.Simultaneously, the European Commission approved the DMCA-like Directive on Certain Aspects of Copyright and Related Rights in the Information Society, which requires member states to adapt copyrights and authors' rights. Although it was a little less strict in terms of fair use rights to be permitted and it still made reference to related rights (writers' rights that were in reality absorbed by copyright in this Directive), its underlying presumptions remained the same.In the United States, there has been a lot of resistance to this law. Congress, the European Parliament, civil rights organizations, proponents of free expression, and producers of digital technology all support this. The fundamental change they make to intellectual property laws has drawn criticism. The balance under current law between the interests of creators and copyright owners on the one hand, and the public interest in the dissemination of ideas via fair use and restricted copying on the other, has obviously swung in favor of the former, the copyright owners, in the first place. The purpose of copyright, according to Perritt, is to reward new contributions, not just to increase the revenue for old contributions. The latter will occur when non-commercial usage that have previously been free for private users, libraries, schools, and research institutes will need payment. This law lays the framework for broad and unprecedented Internet tolling. This is particularly true since this law firmly supports the technical solutions to unrestricted copying of digital works, including all forms of encryption and rights management software. However, at the time of writing, every nation, including those in the United States, Europe, and other regions with new copyright laws, has a number of legal proposals to change the rules and a number of court cases that deal with contradictions and omissions in the new laws.

The second kind of answer is, nevertheless, becoming more prevalent in everyday new media use. All forms of self-regulation or self-organization arise in the market of intellectual value with the change of property rights into usage rights as stated above. There are now several public domain software options available, including shareware and freeware, whose usage is essentially free. Software in the public domain is open to dissemination and modification. Under a so-called General Public License, it is also known as open code. The most well-known example today is the Linux operating system. Although free software claims to be, exploitation and modification are prohibited. Freeware refers to software that must make its source code, but not necessarily for free, accessible to other users. Freeware and open source are synonymous terms. Shareware is software that is initially offered for free but requires a license in order to be utilized. In the new media market for intellectual assets, licenses have generally taken the lead as the most common sort of transaction.

Advertising is a different strategy. More and more, ads are used to pay for software and other information services. Esther Dyson claims that intellectual property ownership on the internet is gradually being replaced by advertisements for intellectual services and products that are actually professional: all forms of support. cutting-edge services in searching, gathering, and processing scattered information. and, last but not least, the sale of the newest version of a program. Relationship management is the provider's primary activity, and going forward, it will also be the major source of revenue for the service provider. The information industry increasingly manages its own operations in this manner without relying on copyright.The free adoption of standards of conduct or good practice by service providers themselves is another illustration of self-regulatory protection of intellectual property rights. They sometimes make promises to help landowners conduct searches and file charges against those who violate their rights. They are increasingly able to utilize search engines and software to check for fraud and violated terms of use and access to protected content. The future's private and public copyright police will be these information agents.

However, technical solutions are likely the most successful ones for the issue of unauthorized use of digital works. The encryption software industry and the copyright industry are working hard to create and adopt a variety of technological controls to limit access to and consumption of these works. They may first be encrypted like any other electronic message. In this instance, receiving a key requires money. Digital watermarks are a unique kind of encryption whereby a product is outfitted with undetectable codes that, in the case of illicit usage, jumble the picture. Once again, hardware players have been created that make it impossible to produce illicit copies. These players automatically record the rights each individual user has to use a certain product and only provide access in exchange for payment. For instance, although purchasing a copy might cost $5, listening to a CD online may only cost the customer 25 cents. This approach resembles data metering in that it uses a built-in chip or a tiny gadget that is linked to a television or computer to track product use similarly to an energy meter. Chip cards may be used to make purchases. Data metering, however, can develop into yet another significant danger to privacy given that every usage can be recorded in centralized processors and archives.

The current state of vast, unchecked unlawful copying on the Internet and in other new media will be totally reversed when these technical solutions are supported by legal enforcement, such as that envisioned in the American and European proposals for legislation. The rights of users, writers, and the general public will be in jeopardy rather than copyright owners' rights anymore. The scale will swing in favor of owners' rights rather than acceptable public use as a result of the loss of the equilibrium. The application of our free-market economy will result in an unprecedented level of private appropriation of information, even though in theory computer networks support an unprecedented distribution and socialization of information and even though technological means are capable of protecting both owners and users.The right to material property that is at risk due to the use of information technology was protected considerably earlier than the right to intellectual property. In the digital era, it is so essential to our economic system that it is vigorously guarded. From the beginning, this has been done.

Various computer fraud and abuse legislation have been enacted into criminal law. It comes as no surprise that the variety of electronic services, commerce, and payments is characterized by

ever more robust legal and contractual protection. The amount and quality of network transactions continue to grow, yet there are still issues. Information services are where there are the most issues. Problems like data banks' responsibility may be found here. Fixing online agreements, giving proof in electronic communications and taking responsibility for errors in them, ensuring the usage of certain standards, and exacting the norms and duties in message storage are other issues with electronic commerce that still need to be resolved. To put it another way, the fundamental principles of contract law, authentication and certification law, liability law, open competition rules, and storage duties are all at risk. All of these issues result from the replacement of paper with alternative data carriers. A growing quantity of information is never written down. However, there is some justification for the law's and judges' confidence in written documents. Data manipulation on paper is simpler to show than data manipulation on computers or online networks. Additionally, information on paper cannot be transferred from one piece of paper to another[7][9].

CONCLUSION

In conclusion, in order for legal systems to continue to be applicable, efficient, and fair in the face of social changes and new difficulties, laws must be continually modified. Societies may develop legal frameworks that foster social progress, safeguard individual rights, and deal with difficult situations by acknowledging the forces that drive adaptation and participating in inclusive and transparent procedures. In a world that is always changing, adaptive legislation is essential for promoting resiliency, creativity, and sustainable growth. Nevertheless, there are obstacles and things to take into account while adapting. Stakeholder interaction and careful consideration are required to manage opposing viewpoints, balance competing interests, and handle any unintended effects. To guarantee that modifications maintain the values of justice and the public interest, the procedure must also be driven by fairness, accountability, and evidence-based decision-making.

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RIGHT TO PRIVACY: AUTONOMY, DIGNITY, AND PERSONAL FREEDOM

Neha Saroj*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, India,
Email Id-neha.saroj@presidencyuniversity.in

ABSTRACT:

The right to privacy is a fundamental human right that plays a critical role in protecting individual autonomy, dignity, and personal freedom. This chapter explores the concept of the right to privacy, its historical development, legal foundations, and contemporary challenges in an increasingly interconnected and digital world.The right to privacy is rooted in the belief that individuals should have control over their personal information, private spaces, and intimate aspects of their lives. It encompasses the right to be free from unwarranted surveillance, intrusion, or interference by the state, corporations, or other individuals. Privacy serves as a safeguard for personal autonomy, enabling individuals to make choices, form relationships, and express themselves without fear of unwarranted scrutiny or judgment.

KEYWORDS: *Anonymity, Digital Surveillance, Encryption, Fourth Amendment, Information Security, Intrusion.*

INTRODUCTION

The three components of the legal framework for the protection of privacy are: national law. international legislation and treaties. and standards of conduct and professional norms.Most national constitutions include protection for the right to privacy. On a global scale, it is outlined in the Treaties of Rome, Strasbourg, and the International Covenant on Civil and Political Rights. We may supplement them with more focused and regionally applicable declarations, like OECD and European Commission directives, as well as more broad ones like the Universal Declaration of Human Rightsthrough electronic banking or information services, through collective agreements between employers and trade unions, or between producers and consumer groups, codes of conduct are accessible as a consequence of organizational self-regulation. For researchers and information specialists as well as for medical personnel and social workers, professional codes are created. Both types of codes are beneficial additions to the law. They provide a temporary safety net or act as emergency laws during periods of rapid technological development[1][3].We'll start by talking about the legal safeguards for personal information. The eight principles developed by the OECD and the European Council as early as 1980 often serve as a guide for legislation and self-regulation in this area. The first four on this list are the most crucial:

Legal Defense

The usage restriction principle states that just the minimal amount of personal information should be collected and utilized for the specified purpose.The idea of purpose specificity states that only personal information should be gathered and used for specified reasons.The personal information must be true, accurate, and current. Additionally, they need to be carefully safeguarded with security.The concept of transparency or openness states that all involved have a right to know what personal information is gathered, why, who has access to it, what will happen to it when it is shared with others, and to whom it is shared.

DISCUSSION

National Legislation Europe

These ideas form the foundation of the EU Directive titled The Protection of Individuals with Regard to the Processing of Personal Data and the Free Movement of Such Data. All EU members implemented privacy regulations based on this directive around the turn of the century. There is no all-encompassing universal privacy statute or any legislation based on these principles in the United States.The United States has a staggering amount of privacy-related laws that solely address certain problems. The federal law that focuses on communication the most is the Electronic Communications Privacy Act. Then there are the Computer Fraud and Abuse Acts, which exclusively address intrusions that have already occurred and caused specific damage. These impose no obligations on controllers and processors of personal data, but they do restrict certain activities of intrusions and eavesdroppers in computers and their networks. Only government entities are subject to these obligations under the federal and state privacy laws.

The American privacy laws are disjointed, which results in a variety of flaws and gaps. Medical records, for instance, are not shielded. Most often, common law or the general constitution must be invoked. The outcome of the case is unpredictable. According to Michel Catinat, the lobbying of industries like the marketing sector, government intelligence and law enforcement agencies, and others causes the majority of initiatives to alter the legal environment to fail. The preservation of simple access to personal data is important to each of these parties for various reasons[4][6]. According to the aforementioned regulation, the EU considers American privacy laws to be so flawed that it forbids the transfer of any personal data to that nation. This may compel the EU and the US to pass laws defending their interests in global trade.

The strictest privacy regulation in the world is the EU directive. This does not imply that it is an unqualified defense of the relevant civil and human rights. Its lengthy term does not include the phrase and the free movement of such data for nothing. The regulation aims to strike a compromise between civil rights and the economic interests of international, mostly European, trade. Some opponents claim that it even validates present business practices that handle personal data in ways that have a high risk of violating individuals' privacy. It is believed that the main driving force for free movement of data, including personal data, is commercial interest. Only later does the directive provide certain protections.It is important to note here four key features of this piece of EU law.

First, it is technologically suitable since it starts with the processing of data in networks. The collection, recording, organization, storage, modification or erasure, retrieval, consultation, use, disclosure via transmission, dissemination, or other making accessible, alignment or combination, blocking, erasure, or destruction of any personal data are all covered by the directive. Personal data is defined as any information relating, directly or indirectly, to an identified or identifiable natural person. This dynamic approach is far better for computer networks than the static one, which bases data protection laws primarily on the premise that individual computer files exist and are exchanged. The initial wave of European privacy regulations was characterized by this rigid approach. Additionally, since video and audio recordings are protected as well, the new regulation is applicable to any multimedia registration because to the wide definition of personal data that was just discussed. In the same way, biometrics.

The comprehensive implementation of the OECD criteria of use restriction, purpose definition, transparency, and quality of personal data, which were mentioned before, is a second benefit of the European regulation. Only specified, explicit, and legitimate purposes may be pursued with the collection of personal data, and they may not be further processed in a manner inconsistent with those aims. The information must be maintained up to date and must be adequate, relevant, and not excessive in relation to the purposes. A controller, defined as any organization or entity that chooses the objectives and methods of processing personal data, is accountable. All activities taken by processors processing data on their behalf through technological methods must be managed by controllers.The need for prior agreement by the so-called data subjects involved supports the transparency of the registration of personal data. They must be made aware of the reason for the registration as well as any actions taken thereafter, such as disclosing the information to other parties. When there is a legal need or when the registration is a requirement of a contract to which the 'data subject' is a party, prior permission is not necessary. There is, however, always the option to access one's own data.

A third benefit of the directive is that independent supervisory bodies, such as national data protection registrars, are responsible for enforcing the strict requirements it places on controllers and processors. The goal and other details of the processing operations of the controllers must be disclosed to these authorities. They are organizations that provide consultation, research, and legal action or remedy. The directive actively supports self-regulation via codes of conduct, best practices, and the appointment of independent protection officers inside companies, even if it is intended to be a solid legal answer on its own.The list of particular categories of personal data that one is not permitted to handle at all is a fourth plus. Data exposing racial or ethnic origin, political views, religious beliefs, trade union membership, and the processing of health or sex life data are among them. This list is highly informative since these types of personal data are those that are most often abused, even while it is not the category of personal data per se that makes it more sensitive than others, but rather the combination of categories and the context of appropriation.

However, this directive and the national laws that are founded on it have a number of drawbacks. The idea of purpose definition for processing personal data, which is its foundational presumption, exposes it to risk in many ways. Its weak point is the need to distinguish between

distinct registrations with their unique goals. Controllers will either find it very difficult to put this into effect or they will demonstrate a great deal of ingenuity in establishing divisions and combinations of purposes that get around the law's intent and its principle of specification. They may designate additional controllers in place of themselves or manage several registrations.The security of personal information in international networks that span legal jurisdictional boundaries is a second area of difficulty. Of fact, EU member states are the only places where European law is enforceable. The Internet, in particular, travels via many different nations. It is challenging to implement the restriction on the transfer of personal data to nations outside the EU that do not provide an acceptable degree of protection. the United States is one of these nations. The registration of personal data of European travelers on American airlines, which was mandated by the American government for security concerns, caused a disagreement between the United States and the EU between 2003 and 2004. At some point, a compromise was reached[7][9].

Domain names or email addresses are identifiable personal data, and Internet access providers are both controllers and processors, while content providers are controllers and network providers are processors, so the laws derived from the EU directive apply to data protection issues across the Internet. The EU directive's greatest drawback is that it is very difficult and expensive to put into practice and easily leads to bureaucracy. However, the directive does not apply where a user of European personal data is not established in an EU member state or does not use a server in such a state - perhaps only passing nodes on their territories in technical transmission, which is allowed. European controllers and processors are really upset about this. Because of this, this piece of law will only be effective if businesses supplement it with self-regulation and 'data subjects' are aware of their assets and uphold their own personal data. Self-regulation is therefore a crucial complement to the legal system in this situation.

We have the creation of privacy grading systems by specialized software like P3 and TRUSTe at the level of specific solutions. These have a lot of potential. They do, however, also have drawbacks. Individual accountability presupposes a degree of expertise in the very complex matters of networked data security that cannot be assumed from the majority of individuals. There are not many well-established organizations providing information and personal assistance in this area.Numerous codes of behavior are visible at the level of collective solutions in the fields of electronic banking, direct marketing, personnel information systems, and particular information and communication systems. Take the last one as an illustration. The best way to regulate information and communication systems is to make sure that the roles and duties of the carrier, system operator, service provider, and bank or other financial account provider are clearly separated from one another. The potential harm to privacy increases when these duties and functions overlap more. For instance, a company that maintains a network with a databank and charges customers may utilize information about users as well as information about how the network is used to build comprehensive profiles.

Nearly exclusively, informational privacy has been the focus of the legislation and self-regulation listed. Although relational privacy is generally protected by most constitutions, in the context of networks it is not protected by particular laws pertaining to, for example, trespassing, the confidentiality of telephone calls, and postal mail. The law in question is founded on

historical technological potential. Trespassing is defined by the law as physically accessing a property, not using interactive media, telemetrics, or electronic house arrest to enter someone else's home. In addition, if the homeowner accepts the equipment installation, the law presumes that permission to enter has been granted. Since the exchange of digital communications is typically not viewed as an equivalent to telephone voice discussion and addressing a computer system is not believed to be analogous to addressing another person, the secrecy of electronic conversation is not effectively safeguarded. The secrecy of conventional mail and telephone conversations does not currently apply to email in the majority of countries, and it is unclear when this will change.

Relational privacy is only very loosely guaranteed by most constitutions when it comes to digital telephones and workplace networks that electronically monitor personnel. Almost no jurisprudence exists. Privacy of this kind is still seldom ever mentioned. It is just one more illustration of how technology is subtly and gradually altering interpersonal relationships. The relevant social and psychological factors are seldom understood. It seems that since they are so ethereal, their significance is not acknowledged, which is all the more reason to explain them in the sentences that follow.Finally, we have the technological privacy protection measures that were previously discussed. For the preservation of privacy, cryptographic approaches have considerable potential. Although privacy-enhancing methods for digital currency are available, banks has not yet widely embraced them. Pretty Good Privacy is yet another encryption method created for all communications. So-called anonymous remailers, anonymous access through public Internet terminals, anonymous email addresses, and pre-paid access cards are further methods of message security.

These methods bring up for discussion the issue of the right to anonymity in electronic environments. All types of criminals and networkers engaging in illicit behavior employ anonymity. Therefore, as has already been said, these technical solutions are a two-edged sword. The Working Party for the Protection of Individuals with Regard to Processing of Personal Data, a group that advises the European Commission on data protection matters, contends that the right to anonymity should be protected to the same extent online as offline. Therefore, using the Internet to send messages, browse websites, buy products or services, or make calls anonymously should be as easy as using it to write letters, peek in store windows, make cash purchases, or make phone calls. The Working Party additionally recommended that we strike the same careful balance between the basic rights to privacy and freedom of expression and the prevention of crime as we do in offline contexts. After all, we have seen a variety of overreactions by governments adopting control measures that impair the right to anonymity and freedom of speech on public computer networks since the end of the 1990s, and particularly after September 11, 2001.

I'd like to add my prediction that the government's present efforts to confront or break into encryption systems to fight crime will turn out to be rearguard operations since steganography and other encryption methods are developing far more quickly than the authorities' countermeasures. It is preferable to refocus the search techniques used by law enforcement and security organizations on traffic analysis and investigations at the source and destination of illegal activity that must travel through the digital underworld to reach the analog surface. The

majority of police officers looking into child pornography are aware that when photographs are encrypted online, it may be difficult to track them down. These images are less of a worry than the actions of production, which do irreparable damage to children. This isn't even true the majority of the time. Therefore, these officials examine the photographs' origins, the people in them, the places they go, and the dissemination channels before acting.Almost none of the solutions mentioned address privacy concerns except informational privacy. It has been suggested that the protection of personal dataif not the technological security of these datareduces privacy protection. While they are increasingly important in communication networks, video surveillance, and biometrics, relational privacy and physical privacy are disregarded.

Community Structure

It has to do with the social infrastructure. The idea that this infrastructure is evolving due to external factors is one of the book's main ideasof networking communications. The inverse is also true, though: communication technology is shaped by society's shifting social infrastructure. The network society is created by these reciprocal shaping processes.Social systems may be seen in a variety of ways. The dimensions of space and time are the most fundamental. In societies, the constraints of distance and time are intended to be eliminated via new media in general and communication networks in particular. The 24-hour economy and the demise of distance are topics of significant discussion. Are time and location, however, truly irrelevant in the network society? In the first paragraph below, I argue the other position: in a specific sense, the significance of these fundamental categories rises.

Depth is the third dimension. The creation of social spaces is a component of social structure. They include, among other things, the public vs the private sphere and the realms of life. These distinctions seem to be less distinct in the network society. As a result of networks that link them, more and more activities that were formerly limited to one area of life are now possible practically everywhere. I'm referring to online job, online learning, and other online activities. What are the chances that these actions will succeed? Are the sectors of life and society integrating as smoothly as they should? On the other hand, is it fair for many observers to worry that the public sphere will become entirely divided into many subcultures and special interest groups that will only communicate with one another?

New social organizations in the network society seem to fill the hole left by the conventional groups and organisations that have disappeared in contemporary society. There are now a wide variety of new communication platforms that bridge mass and interpersonal communication, including chat and message groups, personal webpages or weblogs, and a vibrant array of online communities. Are they causing society to disintegrate or are they redefining community and affiliation in novel ways? Will computer networks like the Internet in general make us more sociable or will they make individuals in contemporary society feel even more alone?The high vs low social structure dimension is the following dimension. Will the network society see a rise or fall in social inequality? Networks make it easier to share information and other resources. But what about the significant disparities in access to digital technology that were noted during the early stages of the new media's introduction? The so-called digital divideis it growing or shrinking? How coherent and cohesive are the structures of the network society as a whole pulls

all the aspects together? Although these structures seem to be exceedingly flexible, this flexibility can come at the expense of increased instability. The value of stocks, currencies, and other economic assets, as well as the popularity of politicians and media personalities and the focus on certain cultural things, seem to grow and fall at an accelerating rate. Crises, news stories, rumors, trends, and crazes spread at an increasing rate. Is this instantiability a necessary component of network usage?

In The Network Society, Space and Time

This demonstrates how a number of important social changes occurring in contemporary society at the start of the 21st century are connected to the usage of media networks. We are referring to procedures like individualization, privatization, and socialization, which together create the new infrastructure of society. Depending on the degree of chapterion and generality, networks might be important for this infrastructure on a variety of levels. Unfortunately, the following narrative must be rather chapter[10][12].Timespace distantiation is one of the historical processes that is most comprehensive and chapter. This phrase is used by Anthony Giddens to demonstrate how human and social time and space dimensions often expand during the course of history. Traditional societies are built on the direct interactions between neighbors. Modern societies are becoming more and more global in scope. The diffusion of customs or traditions breaks down chronological barriers. Information is saved so that it may be utilized later or given to future generations. With communication and transportation reaching more and farther, barriers of space are being broken.

The process of time-space distantiation seems to be nearing its conclusion, at least in industrialized countries, with the emergence of global networks that can be accessed from any house. Many people assume that we live in a global village. Time and distance seem to be irrelevant. Others have spoken of timeless time, while others have lamented the death of distance. But these prevailing notions are only partially accurate. Overall, the process of time-space distantiation is characterized by the compression of time and space in addition to the expansion of space. As a consequence, rather than losing significance, time and space in some ways become more significant. Their intent has become more extreme. People may now choose coordinates of space and time with more precision than ever before because to technical advances in this area.both the expansion and contraction of time and space.

This assertion may be supported by several instances. More emphasis is being put on bridging gaps in location and time, as seen by the massive expansion of telephone and the exponential rise in demand for data transmission. Nobody will contest the stock markets' position as the most sophisticated ICT nerve centers, where timing is of the utmost importance. Profit or loss might be determined by a split second's hesitation or the inability to connect quickly to another financial market. The use of ICT in labor coordination increases the importance of logistics and timekeeping in businesses. Since broadcasters of shows and advertisements seek to reach extremely particular target populations, time schedules are becoming more and more crucial in mass communication. As new ideas about universal time replace the outdated ones, viewers are beginning to place greater importance on the dimension of time.All the fields we just stated are equivalent in the space dimension. 4. The emphasis was on how picky international corporations had grown to be. When carefully deciding where to locate their offices and computer network

nodes throughout the globe and giving them specific roles, they exercise considerable caution. They are able to choose between different areas based on their quality as their power over space grows.

Therefore, space and time expansion and compression are two sides of the same phenomenon. They represent the concept of the unity of scale expansion and reduction, one of the main themes in this book, in its most generic form. enhanced control of space and time across short distances by a bigger social unit is necessary for enhanced control of space and time in a local environment by a small social unit. In noted that large-scale facilities for the provision and movement of energy, materials, and people have always been necessary to permit the privatization of local units into smaller units. Now added to this list is the need for media networks to facilitate communication and information flows. The emergence of the following four aspects of privatization has increased the demand for these infrastructures in households:

1. Lowering the density of dwellings
2. Expanding a single home to include multiple distinct rooms.
3. Diminution of household size
4. A trend in which people spend more time at home and with their families.

The combination of centralizing management and decentralizing production mentioned in 2 increases the necessity for many communication channels in businesses. The expansion of communication and information processing across vast distances occurs simultaneously with an increase in the intensity of information activities in local settings, both at home and in workplaces. In society, the historical processes of socialization and individualization of space and time coexist with the previously indicated scale expansions and scale reductions. Burgers' excellent description of the spatial component was the detachment of society from geography. Social settings created by humans take the place of or are intertwined with the natural world as the relevant context. The significance of the clock time that civilization has created is overriding natural time at the same time. Networks of communication and information basically finish these processes.

Global media networks build on the ongoing local level of temporality by adding several degrees of fragmented temporality. We already had a basic understanding of the 24 time zones that exist on the planet. The first effort to replace local time with a unified computer and network time was made in 1998. As a suggested universal Internet time, Biel Mean Time, created by the Swiss timepiece Swatch in Biel, consists of 1000 beats of 1 minute and 26.4 seconds every day. Of course, the British did not want to fall behind, so in 2002 they proposed Greenwich Electronic Time in an effort to preserve GMT. In a worldwide online exchange, only one time may be utilized, according to both Internet time systems. The computer system then converts this time to the desired local timings. According to the Thai philosopher Hongladarom, they permit both a return to a medieval notion of unitary time, which is now represented by glocal time, as well as the coexistence of many conceptions of time across the world's civilizations.

Computer networks allow for'real time' transmission, allowing messages to be transmitted and received at any time. The significance of socially created time is becoming more and more

significant as a result of the changing boundaries of natural time. The above-mentioned Internet era is only the most recent example. Even the socialization of time seems to be complete, as many individuals believe that in the age of new media, time is irrelevant. It seems that way, but in truth, the natural substratum will still remain. The tensions and effects that result from the union of all these temporal regimes have significant social, cultural, and psychological effects. The examples that follow will show how this is done.Global media networks shrink the size of the earth while geographically expanding civilizationmost notably Western society in previous centuries. I examine this dimension in the pages that follow, temporarily setting aside the temporal dimension.A first observation about space is that the social environment is now being upgraded. People are aware of the diminishing importance of their own environment in the globe, despite the fact that particular surroundings still have a significant impact on individuals. The subtitle of a Milan Kundera book is Life is Elsewhere. Burgers stated it as follows:

CONCLUSION

In conclusion, the foundation of each person's independence, autonomy, and dignity is their right to privacy. The preservation of privacy is becoming more challenging and crucial as social and technological developments continue to affect our lives. A comprehensive and all-encompassing strategy that strikes a balance between the protection of individual rights and freedoms and the legitimate demands of security and social interests is necessary to preserve the right to privacy. In a world that is changing quickly, protecting privacy in the digital age is crucial for promoting trust, autonomy, and democratic principles.

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SOCIALIZATION AND INDIVIDUALIZATION OF SPACE TIME

Padmavathi S*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- padmavathi.s@presidencyuniversity.in

ABSTRACT:

The socialization and individualization of space and time are two interrelated processes that shape human experiences, interactions, and identities. This chapter explores the concepts of socialization and individualization in relation to space and time, highlighting their significance, dynamics, and implications in contemporary societies.Space and time are fundamental dimensions through which individuals navigate and make sense of the world. Socialization refers to the process by which individuals learn and internalize the norms, values, and behaviors of their society or culture. It plays a crucial role in shaping individuals' spatial and temporal experiences, as they acquire knowledge of appropriate spatial arrangements, use of space, and cultural notions of time.

KEYWORDS: *Community, Cultural Norms, Customization, Globalization, Individual Autonomy, Individualism, Personal Space.*

INTRODUCTION

The person is fully aware that the ups and downs of their own lives are becoming less and less significant when seen through the lens of contemporary society. This implies that, with relation to the physical world, the really significant events seem to be occurring elsewhere.Second, a more objective social atmosphere is created. Human-made social environments are becoming more and more like a natural environment. As a result, people believe they are dealing with an unknowable, mysterious, inaccessible, and unmanageable world. There are many signs of uprooting and isolation. Crisis situations in society and the economy start to mimic natural disasters. These experiences are not diminished by media networks, which allow for more direct connection between institutions at the macro- and micro-levels. Contrarily, I have argued that computer networks tend to strengthen opaque and unmanageable processes both subjectively and objectively. A network outage is comparable to a natural catastrophe.

The third observation is the fragmentation of social settings. They consist mostly of more chapter, scattered spaces utilized for specific functions and less tangible, continuous, and collectively used places. Furthermore, many dispersed social networks are progressively replacing homogeneous groups. The communication capabilities of media networks are addressed in more depth later since they seem to be the ideal match for these developments.Finally, we see that social environments have been standardized and generalized. After the expansion of social communications, Human activities seem to become more uniform.

the same activities are happening in ever more places. The spread of western urban culture has been facilitated by the worldwide interchange of experiences via networks. It has led to a loss of the uniqueness and individuality of other, less materially powerful civilizations and is rendered dominant by western economic and technical might. However, parts of the later civilizations are incorporated into western society.

This general socialization of space was pursued in the 20th century within a specific dialectical process, which is a unity of conflicting tendencies: on the one hand, a specific socialization of individual space, and on the other, a specific individualization of social space. While different social scientists may place more emphasis on the first and second developments, respectively, in reality, both processes are ongoing at the same time and are supported by media networks. We once again have a situation where scale extension and scale reduction are expressed as one. The second trend points to the social processes of individualization and privatization, which are pervasive in contemporary western culture. In this regard, Burgers provided a nice description.

It seems as though a process of detachment of society from geography in the second degree is taking place: we try to free ourselves from our immediate social environment in the same way that we did from our natural environment. Instead, lonely people are retreating into their own homes and taking part in a variety of communities without proximity. This word, which comes from Webber, describes the many, somewhat dispersed, and substantial social networks that characterize contemporary civilization. This trend leads to a significant degradation of public space as we now know it. Instead, we discover a totally other kind of public space, which is largely made possible by media networks. This is covered in one of the following s. Richard Sennett and Christopher Lasch both published well-known critiques of the individualization of public space, Heaven in a Heartless World and The Fall of Public Man, respectively[1][3].

A specific socialization of individual space is the opposing trend, which is often ignored. Some critical, emancipatory, or liberal social scientists talk about the 'colonization of the realm of everyday life by the system' or the growing intervention into private life by the government and by fellow citizens. Typically, they characterize these trends as linear historical processes brought about by governmental and corporate entities that, after first working remotely, are now gradually intruding into domestic life. It is difficult to comprehend how a socialization of personal space and an individualization of social space may coexist when these inclinations are only portrayed as a linear process. There is no justification for referring to the 19th century as the golden age of privacy. The privacy of residents in regard to one another and to local authorities was not seen to be important in such small, socially regulated communities. Only in the 20th century has the process of privatization and efforts to safeguard these homes and other places been increasingly threatened by the intrusion of authorities and market organizations into the private lives of families and other more or less private areas. Privacy is becoming an increasingly essential value to contemporary Westerners as a result of this struggle.It is crucial to realize that media networks provide a foundation for both of the aforementioned trends. They might pose a societal risk to people's right to privacy in their personal lives, but they are also a prerequisite for meeting the need for social contact and information in the same areas of privatized life. Future societal conflicts will be encouraged by this disparity.

DISCUSSION

The Blurring Spheres of Living

One of the most significant characteristics of the network society is the blurring of lines between the macro, meso, and micro levels of social life, between the public and private spheres, and between the spheres of living, working, studying, recreational activities, and travel. Thus, telework and telestudy are two of the most talked-about uses of new media. These tele-activities have not yet shown their effectiveness. The overestimation of their adoption is more due to an incorrect perception of the relationships between different spheres of life than it is to a significant underestimation of the social and organizational challenges associated with teleactivity. Most individuals rely on the realms of life, namely the home sphere, to become multifunctional. It is also expected that individuals desire to carry out their tasks in a single location, ideally their home. Both presumptions are somewhat true.

The blurring of the previously outlined boundaries between the realms of life is mostly brought about by the linking of places that are still utilized primarily for certain purposes rather than by the multifunctional use of spaces made possible by communication technology. As a result, we are seeing greater increases in teleactivity in mobile environments than in private spaces like houses. The connections that a network establishes are its most fundamental technological feature. That makes it possible for specialization and multifunctionality to coexist everywhere. nevertheless, this opportunity will only be seized when it is wanted.It is impossible to ignore the potential for living spaces to become more multipurpose. The multipurpose use of time falls under the same category. The new media make it possible to work, learn, and amuse oneself at home any time of day. While this is going on, workplaces also provide possibilities for education, amusement, and remotely mediated conversations with friends, acquaintances, and family. Students will be able to obtain job experience while seated at a classroom desk thanks to direct connections to businesses. Additionally, while traveling and having fun, individuals will be able to work and converse. Finally, those of us who are workaholics will be able to work while taking a vacation.

However, a primarily multipurpose use of time and space has several drawbacks. But before talking about these drawbacks, we'll quickly review the early telework and telestudy experiences, which already demonstrate these drawbacks. The lack of actual teleworkers at the beginning of the twenty-first century must be frustrating to those who support this line of employment. Less than ten percent of workers in most wealthy nations telecommute only one day every week on average. Real teleworkers, according to IDC, are employees who have a legal contract with their employers that permits them to use ICT to spend a portion of their workweek at a place other than the bureau or office. Thus, teleworkers go beyond those who own their own businesses, were previously mobile workers, or have always worked from home. Teleworkers are functional workers who do tasks like data input, data processing, and selling products and services. On the one hand, they are professionals who often work alone. Finally, there is a group of professionals that often work from home and frequently put in extra hours[4][6].

Teleworking has several benefits, as is clear. Less travel is required, and workers may schedule their own days. Additionally, telework may be integrated with other tasks like housework and

child care. However, at the first experimental stage of teleworking, the drawbacks seem to be many. They may be distilled into the following. Poor working conditions are present for teleworkers doing functional tasks. They have limited protection, just like everyone else who works from home under flexible employment conditions. They have very little prospect of advancing their careers inside the company. Professionals with training often put in additional time without being paid for it.Poor communication between staff members and management degrades the quality of the tasks to be completed. The task is regular and is missing important non-verbal cues and informality. suggest that compared to what individuals in the early days of computer networking anticipated, online communication may be richer and more social. However, sophisticated employment and training need extremely complicated sorts of interchange that are often not possible in online communication.

Little help from management can be provided as a result, which is bad for both functional staff and management. Not only is supervision poor, but there are little opportunities for suggestions and cooperation among coworkers. This seems to be the primary cause of the delayed expansion of telework in businesses.The main issue with home-based workers is their social isolation, according to experts. It may significantly lower production to the point that management also notices it. Because of this, several businesses opt to launch neighborhood telework hubs.It might be challenging to keep work and household responsibilities distinct when you telework from home. A teleworker has to exercise strict self-control. Tensions may develop when numerous members of one family spend more time at home than usual.

The benefits of telework and telestudy are similar in that they both include spending less time traveling, having more control over one's schedule, and having the option to combine activities. Teachers may also grade and correct work more quickly, sometimes almost immediately. But in the late 1990s, only a select group of university students who had some computer expertise and were used to working independently could engage in distant learning. Telework's drawbacks are also present in telestudy. Telestudents are totally reliant on contact with the educational division providing this service. They find it considerably more challenging to seek advice from other students when they have academic issues that call for group resolution. Although they may email one other messages, telestudents operate more independently than regular students.In reality, since there is so little contact between professors and students, the program itself must be continually evaluated and modified in order to maintain the quality of instruction.

Many pupils struggle with the independence and self-control needed. Beyond remote education, direct supervision and assistance are extremely lacking. Distance learning will have dropout rates that are at least as high as those of current correspondence and lifelong learning programs.Another socially isolating practice is telestudying. Online connection amongst students is the only way they can rely on one another. A typical educational setting provides as a venue for gathering, for socializing, and for organizing regular study habits. Therefore, it is quite improbable that children and adolescents will be taught primarily via distant learning.Separating studies from other home tasks is quite challenging, much like with telework. It may have a detrimental impact on living together if this divide is enforced, such as by placing the PC in the attic. In a contemporary home, having both too few and too many connections might result in conflict.

These drawbacks of telework and telestudy include many structural restrictions on tele-activity and the general multipurpose usage of spaces:Despite being technically possible to do tele-activities everywhere, they are still restricted to certain locations in reality.They continue to be reliant on an outside source.Regarding the division of labor, they run into problems.They must contend with communication that is of poor quality.These drawbacks are similar in some ways to the restrictions of conventional employment and study at home. However, since the goals are much more ambitious and the quantity and complexity of remote activities rise, mediated tele-activities significantly worsen these restrictions. People believe that tasks that were traditionally completed in centralized, face-to-face settings may now be completed locally and via the use of media. Furthermore, it is believed that there is appropriate, regular, maybe even constant, communication between the center and the local units. Finally, the local units are required to use their own multipurpose areas and terminals without restriction. These presumptions are only true in a small number of situations, as shown by the following set of issues.

First off, every kind of teleactivityaside from mobile networkingis essentially confined to a single location and causes social isolation symptoms. This is true for working at a terminal in general as well as telework and telestudy. The majority of the work has so far been done via telephone or in-person talks with coworkers as well as by travelling throughout the firm and running into them everywhere. The terminal seems to have replaced the coworker as the closest conversational companion while using a computer. It will be claimed that even when a person is working alone in front of a computer, they are still engaging in social interactions. However, individuals feel alone and lose out on certain social knowledge and benefits when social life, employment, and education are confined to online contact.Second, the fact that the majority of tele-activities are location-specific clashes with both the demand for mobility and the need for social interaction. Daily commutes to work, school, and stores, as well as frequent travels to meetings, are not made only to get there. In addition, they satisfy our need for adventure, a change of scenery, and fortuitous meetings or impressions. A buildup of various tele-activities may prevent these demands from being appropriately met.

Third, the quest of individualization in modern western society directly conflicts with dependency on a centrally managed and integrated medium of communication that does not address all individual demands. People desire greater control over their work, study, and free time rather than less, and they also want more personal space with a phone, TV, and other amenities. Those that favor multipurpose usage of a space want that it remain a private space. It will be difficult to satisfy this requirement given the majority of present circumstances at work, school, or home. The dependence that is mentioned also opposes contemporary people's desire to manage a very diverse range of activities and interactions at their own times and locations. Fourth, individuals lack the daily routines and rhythms necessary to identify and coordinate activities when all times and locations are used for multiple purposes. The majority of individuals seem to prefer doing one activity in one location and another elsewhere, or one activity at one time and another at a different time, and this is not without cause[4][6].

Therefore, it is not surprising that managers are reluctant to encourage telework and that instructors are reluctant to try out distant learning. Their opposition isn't only motivated by conservatism or a desire to hold onto their employment and keep employees and students in

check. They actually do have serious issues since contemporary teleactivities still don't meet the standards for sophisticated communication needed for formal work and education. One might get to the conclusion that there are too many restrictions and inconsistencies associated with tele-activities for them to take over employment, education, travel, and leisure anytime soon. Therefore, their demise will not be caused by the blending of the fields of existence. These spheres will continue to serve mostly specialized functions. More and more, mobile equipment is being used to provide new activities and link to other areas.This explains the equipment's exponential rise in new media applications.

Communities and Interpersonal Relationships

The history of the 20th century reveals the breakdown of traditional communities like families, neighborhoods, and groups of workers into associations that, on the one hand, are enlarging as they become more diffused and spread over greater distances, and, on the other hand, are losing size. We are dealing with a lost community, in the opinion of many social scientists, planners, and citizens. see Putnam in particular.

Social Structure

Town planners attempted to counteract this alleged social dislocation after the Second World War by developing and preserving communities. These endeavors fail far more often in the first ten years of the twenty-first century. The strong tendency toward privatization, individualization, and the growth of scattered communities are generally accepted. The emergence of new media, particularly the Internet with all of its websites and discussion forums, has sparked expectations for the revival of community in digital settings. Early Internet users and proponents saw so-called virtual communities as a revival of a lost sense of community. By carefully contrasting digital communities with biological or actual communities, it is possible to assess the realism of such virtual community creation.

Virtual communities are groups of individuals that are not bound by space, time, or any other physical or material conditions, other from those of the people and media that make them possible. Through the use of mediated communications, they are produced in electronic surroundings. Because they rely on the physical touch of human beings coming together to form a'social body' that is referred to as a community, organic communities are connected to time, location, and natural conditions. They thus rely mostly on face-to-face interaction. Every community has its own distinct social organization, language, and modalities of interaction. Finally, every community has its own culture and identity.A relatively small unit with several short and overlapping communication channels, as well as shared activities, is an organic or physical community. On the other hand, virtual communities are loose associations of individuals that might disintegrate at any time. For instance, quitting a group online is straightforward and could go unnoticed. People with a particular interest or variety of activities make up virtual communities. They are referred to as communities of interest as a result.

The social structure of a virtual society is not constrained by a certain moment in time, location, or physical setting. Many believe that these essential life coordinates are unnecessary in virtual societies. A misunderstanding exists here. The reality of the organic communities one is acquainted with heavily influences the substance of communication in networks and, therefore,

in virtual communities. This is where phrases like virtual this and digital that first appeared. When people use the Internet and interact in virtual communities, they bring the world they are familiar with with them as a kind of baggage. People are completely influenced by their surroundings, physical health, and mental state. Additionally, as we just saw, location and time are becoming more and more important while utilizing networks, not less. The majority of virtual communities have very unstable organizational structures because they try to disregard time, geography, and other physical factors. Some believe that in these communities, leadership and coordination are superfluous since technology allows for simultaneous participation from all members. According to social psychology studies, this assumption is likewise untrue. Instead of requiring less planning and structure, online conversation and engagement need more.This criterion is necessary since, at the moment, practically all signals used in virtual community communication are limited to spoken utterances of a certain sort. In organic communities, verbal and nonverbal communication have a wealth of untapped potential. By intentionally employing artificial paralanguage, such smileys and asyn- chronous forms of interaction, this is made up for.

Virtual community members often just share the common interest that brought them together. In every other way, they are diverse. On the other hand, members in an organic society tend to have a variety of interests, making it rather homogeneous. This gives an organic society more opportunity than a virtual community to create and preserve its own culture and identity.We might infer from this little comparison that virtual communities are unable to replace conventional communities. They are too little and undeveloped to thrive without organic communities, thus they cannot replace them. They will, however, be integrated into traditional communities more and more. So-called online communities, which are real-world communities with digital counterparts, serve as a link between them. They need to be distinguished from online communities, which are full-fledged virtual communities that only exist online. The true issue for the future will be the mutual development and strengthening of online communities, communities online, and organic communities[7][9].

The subject of whether the virtual communities built on the Internet increase or decrease sociability has sparked a passionate discussion in response to the partial transition from organic to virtual communities. The following connected anxieties about the Internet were prevalent in the 1990s among those who were observing this new medium:Strong face-to-face relationships with nearby people maintained for a variety of reasons are replaced by weak mediated relationships with individuals far away that are mainly utilized for specific interests, which may lead to social isolation and even loneliness or depression.High Internet use creates loners, computer nerds, and even Internet or computer addictions by reducing real-life engagement.As rich face-to-face connections are replaced by weak, superficial, deceptive, and ephemeral online contacts, heavy Internet use degrades social interaction.

Numerous sociological surveys and time-diary studies that supported and refuted the validity of these worries were released starting at the end of the 1990s. Studies assessing Internet use at a certain period cannot establish causal correlations, which is the issue. Whether these behaviors are caused by Internet usage or pre-existing social and psychological traits of users is unknown. Nie et al. found that in the United States, for every minute spent online during the previous 24

hours, there is a reduction of approximately one-third of a minute spent with family members. Additionally, they discovered that the typical American user of the Internet spends 7 seconds less with friends and 11 seconds less with coworkers for every minute spent online. They determined, in the end, that for every minute spent on the Internet, there is an additional 45 seconds of alone time spent.

It seems that these researchers view using the Internet as a standalone activity. One simply cannot be engaged on the Internet and engaged with others. This claim is false for a number of reasons. It prohibits multitasking by prohibiting chatting to close friends while online. Second, every Internet user is aware that building and maintaining social relationships online is feasible. Face-to-face interactions are only one method of realizing them. Social interaction online and offline may support one another. Online information exchange may improve the quality of meetings by removing the need for certain data to be disclosed. Additionally, setting up appointments online is practical. It will become more incorrect to tightly distinguish between real and online social interactions.

The fact that Nie & al. do not recognize the phenomena of network individualism, which I would like to name network individualization, is another fundamental reason why Nie et al. are mistaken. This indicates that the individual, rather than a certain location, group, or organization, is becoming into the most significant node in the network society. The growth of social and media networks has significantly aided the social and cultural process of individualization, which began long before the Internet, especially in western nations. The social equivalent to individualization is networks. By using them, the person develops an extremely mobile lifestyle and a web of geographically scattered relationships. It inevitably implies that people will use technology more often while alone and that they will spend more time online. Online activity, however, could be entirely social.

More and more sociological polls are coming out in the first decade of the twenty-first century that show the anxieties mentioned above need to be qualified and moderated. Every media is used for social and psychological escape, and certain users, especially those with social and psychological issues, may use it excessively. This is not the fault of the media. The majority of the sociological surveys conducted in North America, as reported in Wellman and Haythornthwaite and Katz and Rice, show that the Internet may also have the reverse effect. They demonstrate how the use of computers and the Internet may boost one's social capital in terms of interpersonal connections, civic participation, and a feeling of belonging. The Internet gives frequent opportunities for social engagement, deepens offline contacts, and increases contact with loved ones, according to this statement.

Several of the sociological surveys mentioned above demonstrate that using the Internet allows for more frequent communication with distant friends and family members. Others add that those connections that were geographically 'just out of reach' benefit the most from increased communication due to the Internet. The use of email and the Internet has even been shown to improve contact with relatives and neighbors who live close. On the other hand, the majority of research, at least in western nations, concur that face-to-face interaction with family members and close coworkers is declining and partially transferring to telephone and email communication. However, this can be a result of network personalization.The Internet, as has

been established previously, complements current communication modalities rather than replacing them. The Internet expands upon the conventional kinds of social capital. These methods include choosing and getting in touch with complete strangers who fit certain criteria, engaging in certain online conversations, and taking action both online and offline. By the year 2000, more than 10 percent of Americans who used the Internet had made pals online. In some nations, it is known that a similar amount of people use online dating services.

One thing is very certain despite the conflicting findings in favor of increased or decreased sociability as a consequence of Internet usage. The Internet is an effective instrument that supports people with both wealth and poverty in terms of so-called social capital. It helps those who already have a strong sense of community, civic participation, and social interaction while allowing others who lack these traits to further isolate themselves and miss out on the numerous possibilities the new media have to offer. This new tool is available to certain individuals but not to others. In this manner, some individuals are able to expand and maintain their social networks, but others see these networks fall apart if they are unable to make up for the growing challenges of sustaining authentic offline social interactions in a busy and individualizing metropolitan culture. This is a reference to the below-discussed issue of the digital divide. A related issue is that, despite using the Internet, people who already have a big and dense social network via face-to-face interaction, phone calls, and writing are more likely to expand it with Internet usage than those who just have a tiny network. The adage those who are more active offline are also more active online is true.

Additionally, it is a certainty that new communication groups and even new forms of communities are created by the support provided by networks and the emergence of various weak links alongside the conventional strong ones. They occupy the space between interpersonal communication and mass communication, which is at least one thing they share in common. Since they exist between two extremesa combination of a public sender and a public receiver and an opposite combination of a private transmitter and a private receiverthese groups and kinds may be analyzed by positioning them along the dimensions of public vs private and sender versus receiver.

A distinct segmentation of public receiver groups may be seen in the interaction between public sender and public receiver in mass communication. This has the effect of giving these organizations a more private personality. In chapter eight, this pattern is addressed and the issue of whether it signals the demise of mass communication is presented.In new media, the segmentation of the public is completed by linking public senders and private receivers. Consultation is a common motif. I'm referring to information services, on-demand video, and audio. But it's also possible to spot occurrences that result from the previously indicated segmentation. According to James Beniger, there is a significant propensity in today's mass communications to establish or imply a personal relationship with recipients. He may connect the expansion of personal direct mail with the growth of marketing, which is supported by studies of niche customer groups. 'Pseudo-communities' are produced in this manner, claims Beniger.

Communication between private senders and public receivers significantly increased during the Fordist era of mass manufacturing. Target audiences in public relations, advertising, and all forms of propaganda are what I'm talking to. This sort of communication is strengthened and

targeted at semi-public reception with a focus on certain target groups in the present era of specialized manufacturing. The new media provide all the amenities required. Furthermore, they don't only provide these services for business and party politics. Networks for specialists, pastime enthusiasts, and activists are multiplying quickly. For instance, the number of networks composed of scientists, hackers, and environmentalists is growing. The same holds true for the availability of personal websites and blogs.The latter phenomena also develop fresh and better ways for private senders and public receivers to communicate. Modern computer networks allow for the almost simultaneous flow of text, audio, and video as everyone with access watches, listens, reads, and sometimes provides input. This occurs with private senders and recipients in online news and debate groups, as well as in groups that launch new forms of public instant messaging and chatting[10], [11].

CONCLUSION

In conclusion, Individuals' perceptions, relationships, and identities are shaped through the socialization and individualization of place and time, which are intricate processes. The trend toward individualization is a reflection of the elevated status of individuality and personalization in modern society. To promote inclusive settings, foster social cohesiveness, and facilitate meaningful relationships in a changing world, it is essential to comprehend and navigate the interplay between socialization and individualization. Social cohesiveness, identity development, and wellbeing are all impacted by the socialization and individualization of place and time. While individualization encourages personal independence and autonomy, it may also lead to social isolation. Social relationships, community ties, and shared experiences may be impacted by the disappearance of common spatial and temporal practices. Fostering social integration and well-being requires striking a balance between personal preferences and group cohesiveness.

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UNITY AND FRAGMENTATION: A NEW SOCIAL COHESION

R Ravikumar*

*Associate Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- ravikumar.r@presidencyuniversity.in

ABSTRACT:

Unity and fragmentation are two contrasting forces that influence social cohesion in modern societies. This chapter explores the dynamics between unity and fragmentation, highlighting their impact on social cohesion and the emergence of new forms of collective identity and shared values.Social cohesion refers to the degree of connectedness, trust, and solidarity among individuals and groups within a society. It is crucial for fostering social stability, promoting cooperation, and addressing shared challenges. Historically, social cohesion was often based on a shared sense of identity, common cultural values, and a sense of belonging to a particular community or nation.

KEYWORDS: *Community Building, Cultural Diversity, Empathy, Global Solidarity, Identity Politics, Inclusion, Intercultural Dialogue.*

INTRODUCTION

We now go to the level of the whole society. It was previously stated that socialization and individualization, as well as scale expansions and reductions, constitute the two sides of modernity. Many theorists of high modernity or postmodernity, including Barber, Castells, Featherstone et al., Giddens, Lash and Urry, and van Dijk, have drawn attention to this duality of social organization. Aspects of modern society's rising homogeneity and heterogeneity, integration and divergence, unification and fragmentation, are all visible at once. This is not some kind of middle ground taken by social scientists who are averse to taking a viewpoint. According to the writers just cited and as stated in this book in the context of the function of the new media in society, it truly is typical of all facets of contemporary society. Social scientists often have to refute oversimplified ideas of a fragmenting society and argue in favor of homogeneity, integration, and unity. Every contemporary and technical advancement appears to bring us closer to the sociologist's classic fear of a collapsing society.

Meyrowitz and Maguire argue that the current trend is towards integration of all groups into a relatively common experiential spherewith a new recognition of the special needs and idiosyncrasies of individua in opposition to those anticipating a breakdown of American society into subcultural clusters of race, religion, ethnicity, and gender, a process allegedly reinforced by a fragmented media system of countless cable channels, pay-per-view programs, and Internet sites. They contend that the boundaries between social groupings are now more obvious and porous thanks to television and other technological media. Therefore, the tendency towards more homogeneity in one aspect and greater fragmentation in another is continued by current media.

Individuals now have greater variety and options, yet traditional group cultures are merging, losing their distinct identities, and blending into one another. Both broadcasting and narrowcasting fall under this category. The lives of individuals who reside in various physical and informational domains have been connected via television. The Internet goes even farther by giving users the chance to engage directly with others from the same origin as well as those from different backgrounds or circumstances[1][3].Therefore, we could see a duality in media structure that closely resembles a duality in social structure in society. According to medium theory, media have unique qualities that create social settings that support certain types of social interaction and social identity.

Social Cohesion and Disintegration

They function similarly to the communication capabilities outlined in 1 in that they both define and enable. Meyrowitz contends that the homogeneity of relatively small groups was facilitated by oral media in primitive societies. In contrast to this, the variety of print media in early modern societies led to the compartmentalization and specialization of social groupings while also promoting the federation of states via the use of a single official language. The history of broadcasting displays a return to this dualism. Radio and television initially used a single or a few networks to connect local and national populations. Following the proliferation of channels and the introduction of pay TV, audiences once again split out while retaining numerous parallels and overlaps. For instance, despite the fact that viewers only choose a small number of broadcasting channels from a much greater number, broadcasters and marketers still favor the mass market.

The duality of media structure is increasing once again in the new media. They provide new forms of media in between mass and interpersonal media, such as the so-called virtual communities or new connections of communication that were previously analyzed. In an integrated or converging system, they serve as discussion, consultation, registration, and conversational medium. The fundamental reason why the new media are individualizing media is because they are based on individual human-computer interaction and are media that may be utilized in networks of linked computers. This enormous range of possible uses allows for both differences and similarities across users and audiences. Thus, the real outcome of the duality of media structurethat is, the duality of social structureis characterized by the tendencies that unite and divide society.

Electronic merchants on the Internet, who have learned about the idea of virtual community and are converting it into new chances for business connections, gladly accept both dualities. In their book Net Gain, Hagel and Armstrong, for instance, propose many ways to capitalize on people's urge to assemble online for fundamental requirements like curiosity, relationships, imagination, and transactions. The preceding definition of virtual communities as novel forms of association is compatible with this concept. The depth, coherence, and financial viability of a community, according to the authors, are all improved by splitting or segmenting it into smaller electronic groupings. Therefore, from the standpoint of the marketer, they begin with a total dispersion of possible communities along so-called vectors. These innovations, however, are not those of the real biological organizations attempting to organize themselves both online and offline, but rather the chapter conceptual inventions of marketing.

According to a commonly held belief, society will become more divided as a result of the narrowcasting of new media based on this categorization and direct marketing strategies that aim to sell to and advertise to very particular demographics. Joseph Turow titled his book Breaking apart America for this reason. According to Turow, new media direct marketing preys on and exacerbates societal differences that are already present. Meyrowitz and Maguire contend that this is incorrect. The tight age/sex bands or lifestyle clusters based on interests, likes, values, attitudes, and purchasing habits are the target audiences that narrowcasters and direct marketers are attempting to reach. Instead of organic groupings of socioeconomic class, race, ethnicity, and gender behaving and organizing themselves and having a lot of overarching characteristics, they are conceptual categories created by marketing professionals.

Will the new media mainly unite us or will it serve to further divide us? The future of the public realm is the subject of this inquiry. The most common response to this query also highlights fragmentation. The causes are clear. The alliance of the public sphere with a specific place or territory. the assumed unitary character of the public sphere that is transforming into a patchwork of different and partial public spheres. and the increasingly blurred line between the public and private spheres are three conditions of the modern public sphere that, at first glance, disappear in the new media environment.Here, a succinct explanation will do. Regarding the first criteria, people no longer need to congregate on a certain region in order to interact with one another and form collectivities. They may create their own public spheres and create imagined communities or virtual communities using traditional means, like the press, the telephone, or satellite transmission, as well as new media, like the Internet. There will be an increase in the patterns of the Jewish and Armenian public spheres, for example, which were not unique to Israel and Armenia before the invention of the Internet.

Second, there aren't a certain number of shared circumstances, opinions, routines, or other social, cultural, or political traits that tie individuals in today's public arena. Particularly in the expanding number of multicultural cultures, it is a highly diverse and dynamic complex of overlapping similarities and variances. The concept of the unitary country or mass society's common ground dates back to the era of national broadcasting through a few channels. Although it was never solidly grounded in fact, it is nevertheless deeply ingrained in the minds of the intellectual, political, and media elite of the concerned countries[4][6].

Finally, as has been shown in several preceding s, the supposed boundaries of every public realm in contemporary society start to dissolve. When watching television, listening to the radio, or browsing the Internet at home, public concerns become private. The various intrusions of privacy caused by computer registration, the airing of private matters on talk shows and reality TV, and the personalization of politics are all examples of how the private becomes public. As new forms of affiliation and communication between interpersonal and mass communication emerge, the new media, and the Internet in particular, give a new dimension to the vanishing line between the public and private spheres.Does this imply that all points of agreement between civilizations as a whole will vanish, including the three criteria of the contemporary public sphere? The traditional notion of a single, undivided public realm, together with the conceptions of a distinctive public opinion, a shared public good, and a specific public-private dichotomy, are simply out of date. Instead, we get a complex mosaic of overlapping and connected public spheres of various sizes.

The Internet itself is a superb example of this mosaic, with its linking structure of connections and its multiple overlapping discussion fora. In addition, there are more and more cross-references and cross-fertilizations between new and traditional media, such as in newspapers, television shows, and programs that refer to websites and vice versa.

The three indicated requirements will hence recur in various configurations. A new kind of social cohesiveness and public realm will emerge, one whose details we are yet unsure of. We do, however, know that the imagined oneness of contemporary public spheres will change into far more intricate and distinct ones. Although it may become less clear, the public-private divide still exists. In conflicts over information supply that is more public or more private, the spirit of the family, and the boundaries between the home and the workplace, new distinctions will be established. Lastly, public communication will be less constrained by space, time, and location than ever before. However, this does not imply that the material environment of the resources utilized in this sort of communication will be irrelevant or that the physical, social, and psychological makeup of the participants will not.

DISCUSSION

Networks and Social Equality

Uneven and combined global development. Production, distribution, and consumption are all now globalized, and this process is one of uneven and combined growth. The division of labor is expanding to include more than ever from the command centers of industrialized nations and multinational enterprises. The most crucial infrastructure for this process is media networks. The processing of information is now done all around the world. Philippine programmers create the internet software that American businesses request. they may only be paid a third of what American programmers seek in compensation. Irish data entry workers handle claims for a New York insurance business for pay that is around 20% less than what would be expected in the US.

These instances first seem to contribute to the spread of employment and, therefore, to social equality on a global scale. Since this kind of work is very restricted and selective, the beneficial impacts of this transfer of employment to less developed nations are unsatisfactory. The duties are created from the standpoint of the center's requirements and interests, not from the viewpoint of the region's greater organic growth. As a result, while the latter are being linked to cutting-edge international networks, we may see growing disparities between wealthy and poor nations in terms of the number of telephone and Internet connections.

On the other hand, since routine administrative and programming labor is vanishing quickly, the adverse impacts of this shift of jobs for developed nations may be more than anticipated. Furthermore, it could contribute to increased labor market fragmentation in western countries. There are enclaves of economic activity in developed nations that have circumstances similar to those of poor countries. This phenomenon is frequently referred to as First World countries somewhat resembling the Third World or a Fourth World. High-quality occupations in the center, often in a western capital, are what distinguish the new employment structure. These positions were carefully chosen based on logistical and managerial standards. The system's periphery is also characterized by relatively low-skilled employment that are deliberately chosen and dispersed throughout the globe. The emanation of the conventional infrastructure of

production and transportation is considerably more significant than the economic consequences on the local environment of both the center and the periphery[7].

Within conventional economic situations, the network economy is an independent system. Initially, streams of commodities, services, information, and products circulate inside national networks. Every local spatial strategy and every regional or national economic policy must take into account this insight. In a global network economy, the significance of geographical boundaries and nearby regions declines while the selectivity of space grows for the organization as a whole. As long as this location offers enough affordable software programmers with direct access to the international communication networks, this structure does not seem to 'care' if millions of jobless Indians reside in and around Bangalore. In fact, it would 'prefer' such unemployment since it keeps programmers' salaries at a minimum.

As a consequence of this global network structure, jobs are dispersed and divided globally. Nowadays, computer programmers can be found practically everywhere, and even the most underdeveloped nations have access to the Internet. At the same time, there is a growing disparity in the number and quality of employment among nations and regions in the global economy. These disparities will widen if no steps are taken to boost the wealth that is produced in the global economy's outposts' local environments. Additionally, there is less physical separation between the wealthy and impoverished sectors of the global networked economy. For instance, top executives, high-tech specialists, and financial gurus often encounter street beggars and sweatshop workers on their way home from work. This might have serious repercussions for social cohesion in a certain location.Even more significant than the degree of social disparity is the sort of work that is emerging or vanishing. We will need to address the issue of networks' effects on class structure in a wide sense. In Chapter 5, when the future of middle management in companies was covered, this question first arose in the text. I aim to identify social classes in the manner of Erik Olin Wright, using the criteria of ownership of the means of production, control over the organization, and ownership of talents and credentials.

There will be more nominally autonomous businesses or agencies as a result of the decentralization of production. These corporations are often made up of one or a few people in the ICT industry. In the service industry, several independent businesses are developed. This mostly has to do with professionals who manage various agencies. Since large-scale manufacturing tools are currently accessible through a single network connection and just a modest amount of start-up money is required, there isn't much holding individuals back from joining the market. It's pretty easy to provide services online. However, the fact that successful ventures are quickly partly or entirely taken up by bigger organizations makes up for the rise in the number of independent businesses that results from this circumstance. The media industry continues to see more concentration.

In Chapter 5, we learned how the usage of networks may alter how companies are managed. Top executives and technical employees are taking the position of traditional middle management and supervision, on the one hand regulating the organization with information systems, and executive people working with the same systems, on the other. The most probable outcome is a division between top management and technical employees, who have increasing control, and executive personnel, who operate with a selected, electronically controlled set of responsibilities and under

flexible circumstances. Although there were other possibilities mentioned in the article, this one is the most plausible. However, in every situation, technicians and information personnel who administer and maintain networks take the position of supervisors and middle managers. If this finding is accurate, then using networks will widen the gap between groups of individuals with various abilities and credentials that is beginning to show up in bigger firms. It will be practically hard to advance inside the organization from the shop floor to top management through supervisory work and middle management.

Therefore, obtaining skills and credentials will be much more crucial than before. In any event, having a high degree of digital abilities delivers a salary premium. Increased inequality in the labor market will result from differences in digital skill sets, among other things. At first glance, ICTs seem to render redundant low-skilled professions while creating a lot of high-skilled ones, notably in the transportation and administrative sectors. According to empirical study conducted in the Netherlands, ICT usage is generally enhancing the complexity and autonomy of labor in the information society. With the exception of data entry and similar tasks, the complexity and autonomy of a work increase as one utilizes ICT more.The last finding, however, highlights polarization as being especially significant. One may see a polarization of the effects of ICT for the various forms of labor when looking at specific occupations. Managers and professionals tend to create a high score when it comes to autonomy at work, whereas service workers and semi-professionals get relatively low ratings. Managers, professionals, and semi-professionals score well when it comes to complexity, whereas manual laborers, business and service workers, and executives score poorly.

These results lead to two inferences that we may make. The first finding is that workers have less opportunities to improve the quality of their work when they don't have access to or use ICTs at work. The second conclusion is that, depending on the kind of labor organization and labor function, having access to ICTs at work and utilizing them more often might have very different effects on a user's labor position and content. Working with databases and spreadsheets all day is a sort of ICT labor that is quite distinct from developing software, creating programs, or using sophisticated search and decision support tools.The fact that there are fewer women in the first section than the second is widely recognized. The second section may even see the disappearance of a significant portion of female employment in low-skilled commercial jobs and administrative positions. However, apart from this, the emergence of networks does not pose a significant danger to female employment. Other industries that primarily employ women, including care and education, make it difficult to completely automate and move to self-service. We may reasonably anticipate more women working in these fields. From an emancipatory standpoint, the prediction that network society would progressively need a lot of communicative, didactic, and commercial abilities is far more significant for the future of female employment.

According to the present labor divisions, gender roles, and gender identity, women have a special affinity for these skills, which will become more important in all areas of the job market in the network society. Therefore, women may have a far better standing on the job market in the future than they had in the 20th century.In a network society where indigenous and ethnic majorities rule, the future is noticeably less promising for immigrants and racial minorities with low levels of education. They often lack digital literacy and, even worse, have inadequate command of the

primary or dominant language. They might potentially lose out on developing the technical and communication abilities necessary for a network society. Lack of proficiency in the majority language is the main disadvantage. The ability to speak and write in English is the lone exception. One cannot even do basic terminal work at the level of data input without knowledge of either the prevalent language in the nation or the English language. Ethnic minorities will surely be among the misfits of the network society in every way, including at work and in social interactions, if this condition is not remedied.

The Digital Current

The following characteristics of my study and analysis of the digital divide are present. First, a difference between four progressively different types of access to new media or ICTs is developed. These include motivational access, physical or material access, skill access, and use accessa difference that will be described later. Second, a theory of inequality in the information and network society explicitly states the causes and effects of inequalities to be seen with various types of access. I'll start with the second quality.The allocation of a lot of resources is the root cause of society's uneven access to digital technologies. These include not just tangible resources like money and property but also intangible ones like time, mental capacity, social connections, and cultural assets. Numerous individual and societal disparities may be used to explain how these resources are divided among individuals. Age, sex, ethnicity, IQ, personality, health, and handicap are all examples of personal disparities. Positional disparities are identified by a certain work or career, a certain degree of education, a living in a poor or wealthy nation or area, and a specific family function. These disparities all seem to be connected to how much access certain groups of people have to modern media.

The technological aspects of the media in question also influence the possibilities for access to that medium. Access to telephones, TVs, and networks is distinct from access to computers and networks. All media have qualities that facilitate and restrict access. Because computers and their networks are versatile or multipurpose technologies that enable various forms of information, communication, transactions, work, education, and entertainment, they promote access. There are thus beneficial uses for everyone. The expansion of networks also results in network effects, where the more users that have access, the more valuable a link is. Multifunctionality, however, also leads to very diverse applications, both sophisticated with plenty of potential for learning and professional development and simple, mostly entertainment-focused. The complexity, cost, and lack of user friendliness of many modern digital media are additional traits reducing equality of access.The effects of uneven access to ICTs might be seen of as more or lesser engagement in the most significant societal areas. It's possible that having access to new media is important for a growing number of occupations, advancement in practically every line of work, and starting one's own company.

As was previously said, access is necessary in social networking to forge new connections and to keep existing ones alive in contemporary culture. In the future, those without access will be marginalized. In terms of location, they will adhere to local alternatives for employment, dating, and other social interactions, leaving the most promising options to mobile individuals familiar with digital media. Those without access will not be able to take advantage of the many new applications and forms of expression that digital culture has to offer in the realm of culture.

Citizens with access to politics participate proportionately more in the government, political organizations, and all other societal decision-making bodies. Finally, access to new media may have an impact on how institutionally people participate in society.The uneven distribution of resources and the existing positional and personal inequalities are reinforced by the unequal involvement in all these societal spheres. The new media are crucial new instruments that assist individuals in achieving better social positions and enhancing their interpersonal qualities, especially in power interactions.

The idea of access was limited to having physical access to computers, the Internet, and other digital media in the early years of the debate and examination of the digital divide. The majority of individuals believed that the digital gap will be eliminated if everyone had access to a computer and an Internet connection at home or in a public space. After a time, some detractors argued for moving beyond access and focusing on the usage and expertise required to utilize digital media. Contrary to what these critics have claimed, the digital divide and the issue of asymmetrical media access are really far more nuanced. Starting with motivated access, the new technology is appropriated. The choice to buy a computer and network connection, to acquire the necessary skills, and to utilize the engaging programs is influenced by motivation. Some individuals lack the necessary motivation. They might be folks who do not like computers or even fear them and do not want to utilize them. Others have previously utilized computers and the Internet, but they no longer do so or only do so sometimes. Finally, there are some who lack the necessary resources, mental and intellectual capacity, and thus have no actual option or chance to use computers and the Internet. They absolutely lack connections. The boundary separating the want-nots from the have-nots is not distinct and is constantly moving.

This lack of drive may have physical, mental, financial, social, and cultural resources that are inadequate. Lack of time, technical expertise, financial resources, social links that encourage and facilitate appropriation of new technologies, and cultural identities and lifestyles that are compatible with computer and Internet usage are among them. In turn, personal disparities are what initially account for the availability or absence of these resources. It is common knowledge that young people and men are generally more motivated to acquire and utilize computers and the Internet than are women and the elderly. Personality and intelligence are also important. Positional disparities don't matter as much for motivation. However, having or desiring a certain career or degree motivates individuals to get access. The same is true for citizens in high-tech nations, where having a computer and an Internet connection is increasingly required.

For new users, the problem is to take action once they have the desire to get access. They may either buy their own computer and Internet connection or utilize someone else's. This may be done in private at work or school, with family and friends, in social settings, or in public at a specific access point. This second kind of access, which I refer to as material or physical access, is a major focus of public opinion, public policy, and all types of study. Many people believe that if everyone has access to a computer and the Internet, the digital gap will be eliminated. This is incorrect since it will highlight access disparities in other areas. The other sorts of access, such as the required skills and actual usage of the technology, continue to need material or physical access as a prerequisite. Physical access is simply one aspect of material access. it also includes the ability to utilize computers and the Internet in a specific location as well as the ability to

access certain channels, programs, or information sources. Conditional access, which requires payment for always-on services and the appearance of the usual login and password panels, is increasingly limiting this.

It's possible that, between 1985 and 2000, all gaps in physical access to computers and the Internet widened in both wealthy and developing nations, with the exception of gender and disability gaps. The categories with relatively high physical access, however, reached a period of saturation around the turn of the century in several industrialized nations, while the categories with limited physical access, which had begun later, were still catching up. This indicates that in industrialized nations, the gap in physical access to fundamental computer and Internet technologies is closing. In contrast, this gap continues to grow in emerging nations.Material, temporal, and social resources are the most crucial resources for facilitating physical or material access. The labor market and educational positions seem to be the most important positional categories, followed by the contextual positions of belonging to a certain kind of home and to a developed nation or area. Age, followed by gender and handicap, seems to be the most important personal category.

One must learn how to handle the hardware and software once they have the desire to utilize computers and some kind of physical access to them. Operational skills, information skills, and strategic skills are the minimum number of digital skill categories required for this task, in that order. The set of abilities required to run computers and their networks, search for and choose information from them, and utilize them for one's own objectives is what I mean when I say that someone has digital talents. Operational abilities are those needed to run computer and network hardware and software, which fall under the area of digital skills. The abilities required to search for, pick out, and analyze information from computer and network sources are known as information skills. The ability to employ these resources as a method of achieving both particular objectives and the overarching aim of strengthening one's place in society constitutes strategic talents.These three categories of digital skills highlight the rising inequity. The population of both industrialized and emerging civilizations is very unequally distributed in terms of knowledge and strategic abilities. Information skills include formal abilities like mastering and managing the unique file and hyperlink structures of computers and the Internet, perceiving and elaborating on multimedia screens, and coping with the Internet's fragmented structure and constantly changing content. Information skills also include important abilities like selecting information, altering it oneself, determining its quality, and fusing data from an expanding range of sources.

Clearly, the allocation of mental rather than physical resources is where this kind of inequality is most prevalent. Inequality in positional strategic abilities and intellectual information skills is on the rise. High levels of traditional literacy are accompanied by high levels of information literacy. Social and cultural resources rank as the second most significant category of resources for digital skills. Users of computers and the Internet's social environment have a significant impact on their prospects to gain digital skills. Practice and their regular social surroundings have a greater impact on their learning than official computer education and instruction.The uneven allocation of these resources is a result of both positional and personal category disparities. The social environments in which users of computers and the Internet may acquire

practical digital skills are defined by positional criteria such as having a certain education and line of work. Age and IQ, followed by sex or gender, seem to be the major individual predictors of digital abilities.

Usage access is a possible name for the fourth kind of access. The ultimate goal of adopting any new technology is to achieve this. The aforementioned access types are essential but insufficient use requirements. Although a user may be motivated to use computers and the Internet, have physical access to them, and has the essential digital abilities, they may not really have the need, occasion, duty, time, or effort to do so. Usage statistics show that many knowledgeable people only sometimes utilize their computers and Internet connections. Although the resources and positional or personal characteristics that determine use access overlap with those that determine the other types of access, usage access has its own set of criteria. Candidates for an explanation might include a certain work or educational background, a certain level of education, age, gender, culture, and the availability of both time and opportunities for computer usage.There are many approaches to assess use access. First, because possessing a computer and an Internet connection does not always imply that they being utilized, actual usage may be shown. Second, time-diary studies or surveys may be used to track use time. Thirdly, a list of the many kinds of applications that are utilized on computers and the Internet may be made. The last methods of use investigation include searching for more sophisticated computer and Internet usage in broadband channels as well as on inventive websites, discussion boards, and chat rooms.

According to an extensive study I conducted on computer and Internet use, the discrepancies in actual use, use time, variety, broadband use, and creative use are often more than those in motivation and physical availability. Just one illustration: In the industrialized nations, the physical access gap between the sexes has almost disappeared over the last 10 years. nevertheless, the skill access gap has persisted, and the use inequalities are still extremely noticeable. In the Netherlands, men still spent 2.5 times as much time at home using computers and the Internet as women did in 2000. Use strongly reflects gender. Compared to their male coworkers, women use computers more often at work, but with far fewer and lower-level applications. The majority of applications, including word processing, billing, filing, and inputting data into databases and spreadsheets, are utilized for administrative and secretarial tasks as well as for education, healthcare, and marketing. In the context of their comparatively more technical employment or for business and finance, male workers utilize computer and Internet apps more for finding and generating information.

Women use email more often and for longer amounts of time at home than men do. It may also represent specific gender preferences in electronic communication that women favor Internet chatting less than men. The same is true for information searches: among women, finding health-related information is quite popular, but receiving news or political information, as well as checking sports scores, is not particularly common. The usage of internet commerce and shopping seems to be gendered, to sum up. Female users of these apps are significantly underrepresented. This also applies to shopping. Perhaps the physical modality is favored over the virtual one in this situation, similar to while conversing.For physical and skill access, material and mental resources are crucial. however, access to utilization is less crucial. Here, lifestyles and other temporal, social, and cultural resources take center stage. Age, sex, race, IQ,

personality, and health or capacity are the main human characteristics that explain these new media consumption resources. They ascertain people's preferences for utilizing various new media apps. When compared to social and cultural resources, the positional categories of work, education, home, and being a citizen of a country or area best describe the temporal resources that account for the scope and intensity of new media usage.

The fact that different positional and personal categories of individuals utilize computers and the Internet differently is one of the most eye-opening statistics concerning access disparities. All of the above mentioned access disparities come together in this area. They are then combined with all of the social, cultural, political, and economic inequality already present. In earlier articles, I analyzed data from the Netherlands and the United States regarding the variety of computer and Internet usage. These findings show that those with high levels of education and money are substantially more likely to utilize database, spreadsheet, accounting, and presentation programs than are individuals with low levels of education and income, who prefer straightforward consultations, games, and other forms of amusement. Han Park re-created similar for South Korea, which showed the same proportion of educated and uneducated Koreans. Cho et al. claimed that US Internet users who are young and have high socioeconomic status used this medium in a very specific goal-oriented way, that is, to strategically satisfy their motivations and gratifications of connection, learning, and acquisition of goods and services. They did this by using the same Pew Internet and American Life Project 2000 data as Howard et al.

The use gap first resembles the well-known knowledge gap, which states that when information from mass media becomes more widely disseminated in a society, portions of the population with higher socioeconomic position tend to learn about it more quickly than those with lower status. The knowledge gap, however, solely concerns the disparate production and transmission of knowledge or information. Because it involves uneven practices and applications, or action or behavior in certain circumstances, the use gap is wider. This comprises information and knowledge.The capabilities and prospects of the new media seem to favour those who already have access to a lot of resources first and foremost. According to the Gospel of Matthew, For to everyone who has, more shall be given, hence the phenomenon has been dubbed the Matthew effect by sociologist Robert Merton. The common saying goes, The rich get richer..'

CONCLUSION

In conclusion, the forces of unity and fragmentation interact to form social cohesiveness in contemporary cultures. Globalization and variety may create new forms of communal identity and common ideals, but they can also cause division as various groups push their own viewpoints and interests. Fostering open discussion, advancing comprehension, and addressing the underlying causes of societal differences are necessary for building social cohesion. Developing common values that go beyond personal interests and creating a sense of community that accepts people with various identities and life experiences are necessary for embracing a new social cohesiveness.

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STRUCTURAL INEQUALITY: AUTONOMY, DIGNITY, AND PERSONAL FREEDOM

Sarath A Pradeep*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-sarath.pradeep@presidencyuniversity.in

ABSTRACT:

Structural inequality refers to systematic and persistent disparities in opportunities, resources, and power that are embedded within the social, economic, and political structures of a society. This chapter explores the concept of structural inequality, its causes, manifestations, and consequences, highlighting the need for addressing these inequities to achieve a more just and inclusive society.Structural inequality is rooted in social structures, institutions, and policies that create and perpetuate unequal outcomes for different social groups. These inequalities are not solely the result of individual actions or choices but are deeply ingrained in the fabric of society. They can be based on various social categories, including but not limited to race, ethnicity, gender, socioeconomic status, and disability.

KEYWORDS: *Discrimination, Economic Disparity, Institutional Bias, Intersectionality, Marginalization, Oppression.*

INTRODUCTION

Numerous network experts have lately noticed this rich-get-richer phenomena to be a striking characteristic of all so-called scale-free networks. It should be considered in this context because it draws attention to the connection between networks and inequality in the network society. Like random networks, which theoretically connect everyone, scale-free networks have no intrinsic scalability for the number of connections. This indicates that not all actors are related or that their connections are not strong or consistent across the board. Despite the fact that most players only maintain a small number of connections, scale-free networks are highly clustered, with huge hubs drawing a large number of links and connectors connecting actors and clusters far away. According to Buchanan, scale-free networks are aristocratic, but so-called random networks, in which everyone has an equal chance of being connected, are egalitarian. Random networks are less like real-world social and media networks like the Internet than scale-free networks. With the expansion of these scale-free networks and the preferential attachment of all relevant players, the phenomenon of the affluent becoming wealthier occurs.

This implies that the core and best-connected players, or hubs, tend to draw an increasing number of linkages. This, for instance, is the outcome of how search engines like Google do their searches and deliver their results. The most well-liked links are listed first. They enhance their appeal in this manner[1][3].Therefore, although having the ability to diffuse and distribute

information, knowledge, and power among those connected, social and media networks also have the innate ability to centralize information, knowledge, and power. They direct resources toward the stronger individuals. The 'Matthew effect' and the increase in use gaps have this as its implications.The key issue is that use inequalities are more likely to widen than close as a result of the population's increased access to computers and networks. If this proves to be the case, the distinction between sophisticated and basic usage will widen. The effects of this systematic pattern of uneven usage will be felt more or less in all important areas of both the present and the future of society. As new media permeate society, this occurs more quickly and with more certainty. Old media and face-to-face communication will increasingly be insufficient for enabling full societal engagement. More individuals will eventually be entirely shut out of certain spheres of society. First-, second-, and third-class residents, shoppers, employees, students, and community members will be the outcome.

Structured inequality would result from this divide. What is structural, exactly? Absolute exclusion from new media use and the network society is a glaring example of structural inequality that can be shown scientifically. People who have absolutely no access to ICT may have less prospects for employment and further education. It has been shown that social networks and cultural resources would contract as a result of total ICT access being denied. Their prospects of participating in politics and obtaining citizenship advantages like public assistance and healthcare would also be reduced by this deficiency.Relative exclusion, which is defined as having less motivational, material, skill, and usage access than other parts of the population, is trickier to prove because it necessitates a thorough analysis of how much participation there is in particular societal fields and how that participation affects particular positions of affluence and influence. On the other hand, over time, relative exclusion may also result in glaring structural disparities.

Structural inequality arises when, on the one hand, a information elite solidifies its position and, on the other hand, socially marginalized people are cut off from communications because they take place in media that they do not own or control. When people's positions in social media and other media decide whether they have any effect on decisions made in a variety of societal domains, the discrepancies become structural. In this case, we may look at 5, which demonstrates the significance of network locations for the exercise of power.This means that the image is not the typical straightforward one of a two-tiered society or of a divide between information haves and have-nots as two obviously distinct sectors of the population. The pattern presented, on the other hand, is a growingly complex social, economic, and cultural divergence. The 'information elite' would be at the top of a continuum or spectrum of distinct positions throughout the population, with a more or less active majority of the population in the center, and a group of 'excluded individuals' at the bottom.

Such a scenario of structural inequality was already worsening before the digital divide, but it is now amplified. Instead of a two-tiered network society, it may be simplified to seem like a tripartite society. The society depicted in this diagram has an information elite that makes up about 15% of the population, a majority that ranges from 50% to 65 percent and engages in some capacity in all relevant social and media networks, as well as a class of outsiders who are shut out of new media networks and have a small social network. The first ring of the information

elite is made up of those with the highest levels of education and money, the best employment and social positions, and almost complete access to ICTs. In reality, all significant societal choices are made by this elite. The elite maintain extensive social networks that connect them to many distant relationships that are strategically significant. The majority of those who make up this elite are frequent Internet and computer users. Some of them spend their days working with these media and constitute a broad-band elite.The bulk of the population, which takes part to a much lesser extent, is located in the second ring. The working class and the middle class make up a significant portion of the population. Although this majority has access to computers and the Internet, they nevertheless lack the elite's level of digital proficiency, especially in the areas of knowledge and strategy. Additionally, it employs fewer and less varied applications. These applications are more geared for leisure and amusement purposes than they are toward a vocation, a job, education, or other goal. The majority has fewer weak relationships across long distances and a smaller social network.

The Network Society's Instability

Positivity Tendencies

It is clear from reading the preceding sentences that there are many competing impulses present in the network society's structure. Time and space are both less and more significant. Additionally, the boundaries between local and global environments and timeframes are blurring. The conventional line between the public and private worlds is blurring and being rebuilt in novel ways. Traditional communities are disintegrating, and online communities are where they are being recreated. Both promoting messages, information, and resources, networks also perpetuate preexisting inequalities by introducing new ones.Networks often include scale expansions and scale reductions. While this is going on, they reposition already-existing structures, accentuate them, and sometimes even polarize them. The whole social structure is subjected to unknown forces as a result. The network society is an emergent social system by nature. There are other factors at play in this instability besides the rapid advancement of technology and the technical susceptibility of media networks. It is also a result of the way that social networks function as societal infrastructures. I want to outline a few apparent instabilities of contemporary societies that are perpetuated by networks before I explain this in more detail.

The economy is always under strain due to the escalating volatility of the stock and currency markets, which see significant price increases and decreases. The exchange of money has often outpaced the trade of things. This exchange is controlled through electronic networks, which accelerate the rate at which prices increase and decrease. Numerous speculative bubbles in currencies and stocks have been sparked by them. The likelihood and frequency of stock market, currency, and company stake crashes are constantly growing. They intensify the capitalist economy's cyclical downturns and upturns and increase the frequency of financial crises.In politics, we can see how people are moving away, being less loyal than ever to their preferred political parties. Voters shift their support from one politician with a strong media appeal to another with the aid of the media system, particularly TV. Populism is gaining ground. Broadcast networks as well as computer networks, like the Internet, that enable grassroots or central mobilizing organizations and electronic pressure groups all contribute to voter drift. When

charges, with or without justification, circulate on TV and the Internet, the reputation of a political leader may be ruined in a matter of hours[4][6].

We can see in culture that clashes between cultures, both locally and worldwide, are happening more often and on a larger scale. In cultural systems that were formerly controlled by a single culture, they exacerbate conflicts. Conflicts between social groups that primarily communicate with one another, such as ethnic groups, may develop from the free interchange and blending of cultural manifestations. Computer networks make both options possible. However, cultural acculturation takes time, and the Internet's potential may lead to conflicts like the current ones between Islamic fundamentalism and Christian and Jewish fundamentalism or between eastern and western cultures in general.

All sorts of rumors, fads, styles, hypes, and inventions are circulating through the media more quickly than ever before. The old-fashioned transmission of rumors and local news via social networks is accelerated by the dispersion power of broadcasting, telecommunications, and computer networks. It causes various message cascades. Fashions, fads, and breakthroughs now have shorter lifespans than ever before. But as a result, their influence on society grows.In ecosystems, many types of human and animal illnesses are rapidly traveling the globe through air networks. The same thing occurs to viruses and worms in computer systems, just much more quickly. With their internal transit rates and susceptibility to infection, both types of systems' instabilities have significantly risen.

At first glance, the network society's instability may be explained by the rise in connectedness. Sadly, the situation is far more complicated. In 2, it was suggested that networks boost a system's adaptive capacity, continuously recovering unstable stabilities. This would imply that increased connection enhances stability and adaptive capability. However, the samples we just saw seem to have too much connectedness. The modern theory of networks and complex adaptive systems occurs to agree with this. According to Stuart Kauffman, systems may not evolve or adapt as much when there are too few connections, while too many connections beyond a certain point reduce adaptability. Less than 10 connections per member are appropriate for large networks with thousands of users. According to Mulgan, as connection grows, too much time and energy is spent on them. Conformity spreads much too quickly, stifling creativity. According to Watts, networks that are not sufficiently interconnected prevent global cascades since the cascade cannot move from one susceptible cluster to another. Additionally, too-connected networks prevent cascades from occurring for a different reason: they get stuck in a state of stasis where each node limits the effect of the others while simultaneously being confined.

Because ideas spread more quickly via social networks than through biological transmission of illnesses, conformity may develop too quickly. While social contagion is heavily reliant on the number of people who have been exposed to the new concept, illness contagion is independent of one another and has the same possibility of happening. In the past, traditional hypes or fads raced faster and faster, but in modern media networks, their pace is magnified several times. They may result in the phenomena of information overload and overcommunication, which increase noise and instability in social system.

DISCUSSION

A culture is a specific way of life practiced by people at a given time in history that creates a variety of artifacts and signs that may be passed down to future generations via the use of information products and communication channels. Digitalization may be seen as a marker of culture since it includes the artifacts and the signifier and communication systems that most clearly distinguish our way of life from others, according to Charlie Gere. He believes that despite appearances, digital culture is not as fresh as it would seem and that technical advancements have nothing to do with its long-term growth.Technology-based methods of thinking and doing are referred to as digital cultures.I aim to take these methods of thinking and acting from technology in this. What effect digitization has on cultural manifestations is the first issue I address. Does digitization merely affect these expressions' appearance, or does it also result in significant changes? For instance, does distinction happen or are signals and artifacts getting more and more alike since they all utilize the same digital code?

First impressions of digital culture reveal an exponential increase in the number of expressions. The same holds true for how quickly things are produced, transmitted, and traded. What are the effects of such an explosion of culture? I talk about the phenomenon of communication and information overload. How much of an issue are they? Research indicates that the amount of data and information sources has increased throughout the 20th and early 21st centuries. What is wrong with the information's quality? Does it make it possible to learn more and grasp our society's growing complexity better?The majority of digital culture occurs on screens, which is another first impression. Currently, individuals in industrialized nations watch screens on their televisions, video games, computers, movies, presentations, and cellphones for an average of 5 to 8 hours each day. What effects will this visual culture have?

It is obvious that digital culture is affecting how we consume media. A culture of print media is evolving towards an electronic culture of computer and audiovisual media. Are radio and television the next forms of media to be phased out in favor of the Internet and computers? The usage of media seems to be expanding in the context of multimedia. Is this really occurring, and if so, does it apply to everyone equally? The switch from linear to hyper-link media is another subject that is tackled towards the conclusion of article. One of the most significant cultural repercussions of the development of computer networks, which has the potential to totally alter how media is used in the future. The growth in interaction and the assumed active user, who is no longer dependent on the network's editors and merchants for intermediary services, are further effects. Are digital media consumers really so engaged and independent?

Being Part of a Digital Culture

There are varying opinions on which technological aspect of new media has the most cultural influence. Many people believe that it is because they are digital. The term digital revolution is quite common, as are digital city and digital being, at the very least. When used in this manner, the term implies more than it expresses. 1 clarified that digitization is only one of the new media's technological aspects. What possible cultural implications may it have? We will need to go farther than is typical in popular portrayals of digitalization to get the answer to this issue.Every object may be converted into a distinct byte made up of strings of ones and zeros

thanks to digitalization. This holds true for data, texts, photos, and audio. They can be created, ingested, and blended in every way conceivable in different forms. Everything may now be shown on displays and accompanied by sound. On digital data carriers, everything may be stored and retrieved in almost infinite quantities and at virtually infinite speeds. Digital technology and cultural effect have previously been connected in the phrases before. At this point in the discussion, it is clear to the reader that digitalization enhances the likelihood of many cultural phenomena, including standardization, differentiation, fragmentation, collage, acceleration, visualization, and increased quantity[7][9].

Pre-Planning and Imagination

In popular literature on the new media, it is said that these media would provide limitless choice from our significant cultural legacies and a new creative potential among the public since individuals will be able to use multimedia to make their own works of art and other things. Bill Gates said that ICT would provide new avenues for personal expression in The Road Ahead. ICT allegedly gives a new generation of geniuses unprecedented artistic and scientific opportunities. For those with the resources and aptitude to take advantage of them, these chances certainly exist. The likelihood that we are dealing with a new and original type of work, as defined by Dutch copyright law, is, however, dwindling. We will be digesting, revising, and altering other people's creations more often. This is only the subsequent stage in the development of art. The work of art has gradually been removed from the creator and placed in the hands of the public throughout history. After the period of extensive technological art reproduction, we are now approaching an era when individuals are able to make their own works of art using all the many components of cultural heritage.

Users of multimedia are encouraged to construct a variety of video collages and pictures, sample and produce music from CDs, choose a movie's finale from among numerous possible screenplays, and design their own chapter Mondrian-style paintings out of red, yellow, and blue squares. Of course, revising and modifying the cultural legacy has always been a part of both professional and popular art. However, we are now moving forward by a crucial step. More ways are added between source and outcome in terms of quality. On paper and canvases, there is more than just paint and pencil. Digital media's production tools are partially autonomously operated and self-programmed. To acquire certain craft, the user need merely modify them. The material being worked on is not devoid of existing cultural information. In this approach, creativity is seen from a completely new angle.

The same may be said of digital media's supposedly limitless alternatives. In actuality, everything is pre-programmed and centered on choices from a menu. Typically, the user can only make broad choices. Users selecting options from details would need too much pre-programming.Anyhow, these choices do result in both a standardization and a divergence of culture. There is a growing selection of stuff available. However, the components of this information are also starting to sound more and more similar. Similar organizational structures are used throughout. Multimedia combines information sources that were previously distinct. This might, in certain cases, contaminate informational sources and erode informational contents.Combining fragments and collagefragmentation's effects on cultural contents.

Analog sources are technically divided into bits and bytes as a result of digitalization. This makes it possible to freely divide the information in these sources. Our culture has already begun to become more fragmented as a result of digitalization and the processing of analog materials by multimedia technology. When examining the changes in text brought on by word processing, Michael Heim identified this tendency a few years ago. There is text available with a focused structure. The argument is pre-structured with distinct topics, objects, and paragraphs.Later, it is simple to add or remove items, which can cause part of the argument's flow to be lost. The organization of the Internet is another example. Website material is dispersed among several pages and graphics that may all be accessed with a single click. By creating linkages, leaps, and associations in this manner, associations take the role of the conventional linear processing of material.

We now turn to the substance of the songs and movies that have been processed using interactive software. Music CDs with interactive features are made up of discrete, accumulating layers and pieces that are simple to extract, alter, sample, and mix. The cohesiveness of a creative work is rapidly destroyed as a result of this modularization. Because the purpose is to enable listeners to make their own collages. This is abhorrent to many conventional creators, designers, and producers. They believe that the distinctive design and coherence they have created are the core of their work. They either distance themselves from the consumer's outcomes or embrace them only because doing so is profitable.

Acceleration

The creation, distribution, and consumption of information and communication signals may all be significantly increased because to digitalization. 'Fast' has taken on special significance in the realm of hardware, including everything from computers to modems to lines to software. The need for speed never goes away. This provides even more evidence that the widely held belief that time is irrelevant in new media is untrue. On the contrary, time's significance is becoming more radical. Time savings are promptly followed by the necessity to design and fulfil additional requirements.Motives in the economy, organization, and consumption influence the demand for speed. A culture of speed is created as a result of these incentives, which are fueled by a rapid advancement in technology. This implies that our society has undergone a significant transformation. The examples below might be helpful.

First, cultural expressions soon become dated. Trends move quickly in lockstep. Modern society is characterized by the coexistence of several trends that vie for favor. Second, information is transmitted in ever-increasing quantities, at ever-increasing rates of speed, and only to grab attention. Information and communication overload is a phenomena. Producers anticipate and reinforce this shallowness in consumers' perceptions of cultural manifestations as a consequence. In addition, the pace of language and communication has accelerated to the point that we are unable to stop and consider a message, such as when writing a letter or striking up a discussion. Instead, we pick up the phone right away and respond to inquiries as they arise by phone or email. The new medium has an impact on language as well. This will be covered in the following. It develops an abrupt manner and has a staggering quantity of jargon and acronyms. The last illustration is the growing significance of pictures in our society, a category of information with inherent symbolic and creative characteristics. From this point of view, he also

questions the notion that a society of pictures stifles imagination and innovation. Perhaps those who were brought up in a reading culture have lost how to dress properly?

By extending Peters' claim, we may state that complexitynot simplificationis the main issue with replacing text on paper with audiovisual display. There will be a lot of information on the screens. They are able to display information in incredibly complex forms and close proximity to one another, including images, text, numbers, graphics, and visual augmentations of noises. We are already familiar with the emergence of a staccato culture in audiovisual entertainment, which is characterized by a barrage of stimuli that becomes breezier, faster, and more action-packed.Intellectuals or cultural pessimists should be more concerned about the level of energy and initiative necessary, as well as the fall of writing and speaking, than they should be about the loss of reading and listening. The pattern of allocution changes to consultation, registration, and conversation with the emergence of new media. Although it seems that local activities and initiatives are expanding, this is not required.

Allocutionary communications are and always will be transmitted messages, despite the fact that their recipients have the ability to mold them in their brains. In addition to picking from an offer, consultation also involves registration and question-and-answer sessions. The only pattern needing active multilateral contact is conversation. Yet, until very recently, this pattern has not made much progress in new media. The use of videophony has not yet been widely adopted. The most significant new media application nowadays is email. However, it still only offers a few options for expression. A tiny elite still engages in the interchange of more sophisticated forms of expression such original music, video, software, and many sorts of graphical designs.

Screens are becoming more prevalent in many aspects of life, which encourages the imitation of comparable activities. And when the concomitant, pervasive usage of push buttons is taken into consideration, this will be much more true. It's possible that many individuals may spend 8 to 10 hours a day in front of screens of various types in the near future. For instance, around 5 hours a day are spent watching television or videos by Americans. The recommended daily maximum for working in front of a computer is five hours, although in reality, this is often surpassed. The usage of portable devices with displays can increase the daily total by an hour. The strain it puts on the body and mind might be detrimental if screens are used excessively. When opportunities to unwind in other settings and engage in face-to-face contact are diminished, the effect of ubiquitous screens will grow even more. Screen professionals encounter comparable activities in their free time. Face-to-face contact, including the physical activity that goes along with it, still serves vital relaxing purposes for people that are mainly unsatisfied by mediated communication. Therefore, spending too much time in front of screens will limit one's ability to grow physically and mentally[10], [11].

CONCLUSION

In conclusion, An ingrained and enduring kind of social injustice is structural inequality. It includes structural gaps in access to opportunities, resources, and power that hurt vulnerable populations. The complex root causes of structural inequality must be acknowledged, governmental measures must be put in place, and inclusive and equitable institutions must be promoted. We can build a future where everyone has equal possibilities to succeed and

contribute to society to the maximum extent by working toward a more equitable and inclusive society. In addition, eliminating structural inequality requires identifying and challenging implicit preconceptions, stereotypes, and biases that support uneven opportunities and treatment. It necessitates creating a climate of understanding, respect, and tolerance where diversity is valued and equality is given top priority.

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QUALITY OF NEW MEDIA CONTENT: EVALUATING INFORMATION AND ENGAGEME

Rajesh Sisodia*

*Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-rajesh.sisodia@presidencyuniversity.in

ABSTRACT:

The quantity and quality of new media content have become increasingly important in the digital age, shaping our information consumption, entertainment experiences, and social interactions. This chapter explores the interplay between the quantity and quality of new media content, examining their implications for individuals, society, and the media industry.The quantity of new media content has witnessed exponential growth due to advancements in technology and the rise of digital platforms. The internet, social media, and streaming services have democratized content creation, enabling individuals and organizations to produce and distribute a vast array of media content. This abundance of content offers diverse options and choices to audiences, allowing for personalized consumption and niche interests. However, it also poses challenges in terms of information overload, filtering through vast amounts of content, and ensuring the credibility and accuracy of the information presented.

KEYWORDS: *Authenticity, Content Creation, Digital Media, Engagement, Information Overload, Multimedia.*

INTRODUCTION

Mediated communication is always characterized by some kind of technological adaptation to the relevant medium. Obviously, this has an impact on how people communicate. The screen has both potential and limitations as a reproduction medium. They vary depending on the audience and the intended form of communication, including mass, tele, and data communication. There are significant commonalities as well, however.The ability of displays to draw people's attention is their strength. Today's greatest issue with mass communication is how quickly people's attention spans are eroding. To counteract attention dilution, the stimuli presented grow ever-shorter and more potent. Contents tend to be fragmented by brief yet stunning news bursts, swift action shots in movies or video clips, and glittering displays. Background knowledge and reflection vanish or are relegated to the background. Although we have seen that the shape of pictures is growing more complex, many media critics claim that this will lead to shallower mass media content.

In data transmission, one can anticipate that the other party would maintain the necessary self-control to keep following the contents of the screen. The basic properties of computer languagewhich are structured, standardized, and encoded in algorithmshave been used to

regulate communication in this situation. It is well knowledge that doing this would highlight certain types of material while restricting others. Quantitative indicators take the place of qualitative ones. Compressed data, charts, graphs, and other similar signals are often used in data transmission for obvious reasons. This is carried out in a pre-planned sequence. Consider someone who examines data from a databank or from video-text, for instance. The data is condensed into manageable screen-sized bits. It is impossible to use long text for things like background information. Chapters or main points are preferable. Informational chunks are arranged in fully pre-programmed search patterns. Reading a newspaper is not the same cognitive process as reviewing such information. In the latter, the reader has far more control over how quickly and intensely to read as well as when to pause, skip, and resume reading. Furthermore, no prior understanding of search operations and structures is necessary[1][3].

Early communication experiences that included texts, pictures, and/or sounds in addition to noises tend to indicate a selective limiting and articulation of certain material. For instance, email communication is characterized as being abrupt and ad hoc. There are many instances of incomplete or truncated sentences. There are several acronyms and stopgaps used.As communication channels become increasingly integrated, more sender and message kinds are shown on the same screen. The employment of a single screen as a presenting tool for speech, consultation, regulation, and dialogue is theoretically possible. Receivers could therefore find it challenging to differentiate between these patterns and the many senders and messages they are receiving. Well-known particular circumstances vanish. Several examples will help to clarify this. To judge the plausibility and credibility of a communication, people often start by looking at its source. According to several studies in mass communication, messages received by television are seen as being more reliable than those received via newspapers and magazines. More people trust audiovisual media than written ones.

Second, listeners were still able to distinguish clearly between allocution, consultation, registration, and dialogue in the various mainstream media of the late 1990s. Using integrated media clearly makes this more challenging. With the introduction of tele-text, the situation has already altered. Some people believe this medium to be allocution, while others believe it to be consultation. Misunderstandings may also result from the fact that new media may be 'interactive' in a variety of ways. Allocution's vast menu selection may be understood as free consultation, but a medium's consultation could be seen as a kind of communication with that medium. Registration and consultation are both covert forms of advertising.The last scenario involves individuals who believe they are participating in an allocation, consultation, or dialogue but are really being registered without their knowledge or consent.

The differences between different forms of information and communication within patterns may become more hazy when information and communication are increasingly presented on screens. This phenomena is already well-known to us thanks to TV attention. Advertising, current events, entertainment, informational programming, and news are becoming more similar. They are integrated across all programs or delivered similarly. As commercials or covert and covert advertising, advertisements are introduced into and between programs. Future communication and consultation techniques, informational sources, propaganda, and advertising will be difficult to distinguish from one another. One glance at news papers or magazines is often enough to

determine if you are dealing with an advertising. This is much easier to hide on a screen. Consider the creative ways that advertising is shown on websites and on commercial television.The need that all of these cultural manifestations be transmitted through the screen turns culture into spectacle. In our culture, experiences are often replaced by images: vacations are turned into window looking, slides become keepsakes, gymnastics is turned into a TV show, and music is turned into a video recording. The traditional forms of culture that relied on a process of symbolic exchange no longer apply to new media.

Without a doubt, the most basic impact of screens' ubiquitous presence is the increasing displacement of an individual's direct personal experience and direct contact with observation via glass and camera lenses, often those of others, as well as with mediated connection. One of the first psychological issues addressed in chapter nine is this. There is a risk that individuals may begin to live in an artificial world that leaves less opportunity for intimate, direct communication and genuine experience. Due to the more or less constrained communication capabilities of the different media, people grow dependent on the kind and quality of pictures created by them. Debord talks about a spectacle-based society. Attending a football game in person, though, is a very different experience than watching the same game on television. Teleshopping and traditional shopping cannot be compared. Meeting up with a buddy will never be the same as talking on the finest videophone ever[4][6].

As the process of individualization progresses, replacing direct human experiences with generated pictures will have a greater societal influence. A universe of pictures confronts the person more often. Both at work and during free time, fewer people are talking about the visuals given. People commute home from their mostly solitary jobs in front of monitors, sometimes listening to a personal radio, to watch their own favorite TV show. Family nighttime TV viewing is a thing of the past. Since there are now so many alternatives available, discussing one's own findings with others has become all but impossible. This is the fundamental cause of some social scientists' anxiety about image cultures: they worry that when these cultures are combined with social segmentation and individualization, social cohesiveness would be compromised.

It's not only intriguing, but also captivating, to watch a screen. Screens are quite effective at drawing attention, as was previously said. We are easily distracted by surrounding devices even while we are having interpersonal talks. A screen may glue people to it as well. When stationary equipment is employed, workers are also restricted to their work environments. When mobile technology advances, the latter tendency will be reversible.The compelling and constraining qualities of screens pose a number of dangers to people's freedom. The ability of television and other visual media to manipulate people has previously been overstated. These media are now given a more limited function, which is to determine the conversation's agenda and themes. They have a significant role in influencing what people speak about and consider to be relevant. The ability of visual media to set the agenda may be reinforced by the ubiquitous presence of screens and the selective articulation of their information.

The outlined features of the culture of images will mostly be seen as negative. For a number of reasons, this perception has to be addressed. The most significant perceptual and cognitive mental abilities in humans are visual perception and visualization, which will be emphasized in Chapter 9 on psychology. Perhaps throughout the history of language media, these capabilities

have been underutilized. In such situation, growth may be shown by a deeper visualization of culture.Two further changes must be made to this description. First of all, the findings only relate to the degree to which screens will take over all forms of presentation and displace other forms of mediated communication as the most apparent form. The educational and cultural programs attempting to counteract the negative impacts are the second thing we have neglected to consider. A change in how language, information, and computer science, as well as social studies and the humanities, are taught may be their top goal. These topics need to be taught in order to help students interact actively and consciously with our visual culture and to help them understand the selection, selection, and selection processes that go into visual communication. Cultural pessimists would be better off focusing their efforts in this direction rather than making fruitless efforts to reinstate reading printed texts as the presumptive most significant intellectual activity.

DISCUSSION

It seems that the new media greatly enhance the amount of information and communication in our society. This may seem to be accurate both in a quantitative and a qualitative sense. But is this perception accurate? On second thinking, there are many of objections that may be raised. We must first clarify the difference between information and communication. Data or signals that have been interpreted by humans make up information. Here, the receiver's process of interpretation is highlighted. However, communication is the flow of information from a sender to a receiver when the former is aware of the latter. The social dynamics of knowledge exchange and transmission are the focus of this discussion. Communication requires information because the interchange of signals should not be seen as the delivery of mail or the transmission of data via a pipeline between senders and recipients, but rather as the creation of a shared meaning by individuals who interpret the signals in the context of their social environment[7][9].

In contemporary culture, the amount of information available is growing quicklypossibly enormously. Data and studies compiled by Pool et al. show that since 1950, the quantity of information available has increased by around 8 to 10% year, but the rate of demand has remained relatively flat at only 3%. Our civilization is extracting a far more gradual rise in understanding from this information. We must contend with selective attention, selective perception, and an abundance of information as the information supply overlaps and repeats itself often. But the conclusion concerning the effects of knowledge is the most startling and striking. The influence of information on behavior seems to be minimal since, until a certain stage is achieved, information has little effect on people's or organizations' actions. Public organizations and businesses are employing more information now than they did thirty years ago to make the same judgments. These Dutch communication scientists assert that little progress has been made in decision quality. Similar to this, Dordick and Wang have discussed the well-known productivity paradox, which states that, particularly in the service industries, information technology does not lead to the projected productivity benefits.

How should one justify these audacious and unsettling findings? By no means do they imply that information technology is ineffective. Contrarily, some could argue that without technology, our communities, companies, and personal lives have become so incredibly complicated that we are no longer able to manage them. Think about a modern business or government agency without it.

They would get mired in antiquated bureaucracies. The theory that ICTs are only just able to keep up with the complexity of social, economic, and cultural life we have created may be the best explanation.However, the disparity between the growth of knowledge and information and their application results in overinformation, or information that is created in excess of its intended purpose. Additionally, it highlights a phenomena Van Cuilenburg and Noomen refer to as information dud: a growing quantity of information creates answers to questions that have yet to be asked rather than providing solutions to those that have already been addressed. In fact, the process of creating information is now in some ways autonomous and self-improving. These events are what David Schenk refers to as data pollution.

According to him, information is no longer useful or powerful but rather is too plentiful and is rendering us powerless since our information supply is so cont- aminated with meaningless and redundant material. The law of diminishing returns kicks in when there is a certain amount of input. Instead of improving our quality of life, the abundance of knowledge starts to breed stress, confusion, and even ignorance. Information overload is not an issue for human brains unless we are required by our environment to choose knowledge and information from an excessive quantity of material, such as at school, at work, or in an overloaded leisure time program. Information overload causes stress in each of these situations. Outside of these kinds of circumstances, however, individuals just fail to notice the abundance of signs. Humans have various mental defenses to block signals from entering their heads, and these defenses will work even harder under pressure until they fail and nothing is recorded at all. Our mind has all the filters required for signal perception and processing under normal conditions. When there are too many signals to register, they intensify. Another response is to give each input less time. Signals of low priority are disregarded. In social interactions, the burden of solving the issue is placed on others: ask someone else, let others find out. Additionally, signals are ignored when the receiver remains silent or has a hostile demeanor.

Finally, the sources that are causing the damagedocuments, tapes, files, or programsare simply disregarded and stopped being utilized.Is there a problem with overcommunication and communication failures as well? After all, the amount of contact through media is growing quickly. The instance of mass communication makes this particularly clear. The volume of data transmission and telecommunication has also significantly expanded during the previous several decades. In this case, the situation is different from that in mass communication since supply cannot rapidly outpace demand. After all, communication involves both parties. Although it may have more capacity, it does not always indicate that it will utilize it. In contrast to families' usage of telephone, large organizations, for instance, employ data communication extensively. The possible mismatch between the increase of communication, the quantity of knowledge gained, and the impacts on behavior as contrasted with information is alleviated by this basic distinction between information and communication. By the late 1990s, we might conclude that just the communication supply, namely the mass media, had reached an overcommunication point. The average number of viewers and listeners for each radio and television channel has been declining since there are more and more channels presenting the same programs. Market redistribution and fragmentation are the outcomes. Supply is still growing thanks to the money from ads. 'Communication duds' may result in the creation of general interest channels with essentially the same material but few viewers or listeners.

In the late 1990s, demand for data transmission and telecommunication still outpaced supply. There is no issue with excess in this situation. However, we must also deal with data smog in this situation. It is becoming more difficult to draw out essential information from an expanding supply. For instance, the Internet suffers from an overabundance issue, providing countless sites and pages and an uncontrollable amount of sources as a consequence of the use of search engines. We are dealing with 'junk mail' or'spam' problems as well as just having too many communications in general while using email, fax, and answering machines.Another phenomena, which might one day be quite significant, is far more difficult to classify as a widespread issue. For individuals attempting to shield themselves from being approachable at any time or location as a consequence of digital and cellular phones, there is an issue of communication overload. The vast majority of communications that are generated by these new forms of telephony end up being unnecessary or useless.

There is a quick development and introduction of technical solutions to the overflow of information and communication. There are several personal or information agents, message and information filtering systems, and search engines available. In the networked and information age, these methods will be crucial. The amount to which we use these tools, though, will be a crucial one. Because they come with three major hazards that might have very serious repercussions, we shouldn't totally depend on them.The first of these dangers is placing an excessive reliance on one's intellect while allowing one's own capacity for judgment to deteriorate. Systems do improve in intelligence, but users may become less intelligent. These systems really have all the advantages and disadvantages of artificial intelligence. Systems with intelligence may change to accommodate changing user preferences. Standards, beliefs, and emotions of individuals are changing much more quickly, however. Additionally, they vary in a wide range of settings. They are not completely programmable.Another risk is that individuals may avoid fresh and unexpected impressions and contacts if they use these information gadgets constantly. People may even imprison themselves in their own information prisons. We could choose to settle down in settings that are both limiting and safe. Perhaps not in theory, but often in practice, we can isolate ourselves from the rest of the world or society by creating a private subculture.

Significant Quality

The last issue is a threat to user privacy when users entrust registration systems with more and more information about their personal preferences and traits. Your information agent will introduce you to your connections in the twenty-first century. There is little question that authorities and businesses will be highly interested.Therefore, it's vital to utilize these technologies carefully, selectively, and to maintain control over all crucial decisions and actions.The evaluation of information and communication quality is, to some degree, a subjective process. As a result, certain criteria for the caliber of information and communication must be developed. The final one will take into account the pragmatics and substantive standards for new media content.

The vast volumes of information and communication that are provided in new media do not always equate to higher quality, according to criteria pertaining to their content. It is common to use the alleged knowledge pyramid to explain this claim. The pyramid of information processing

might be a better description, since knowledge is merely one outcome of the mental and technological processing of information.Endless numbers of bits and bytes are created at the base of the digitalization pyramid. Therefore, every digital zero and one may potentially be converted into a specific piece of data using computer machine language. Letters, pictures, or other symbols may be used as this data. When data are not comprehended by humans because they are irrelevant, people are not able to cognitively transform them into information. Information is simply made up of data that have been understood. Information, on the other hand, is often inconsequential or only briefly significant.

Knowledge is defined as a very modest piece of information that has long-lasting value. Facts and causal relationships that explain how things function and how we can utilize them make up knowledge. Scientific knowledge is a particular kind of knowledge. Finally, wisdomthe rarest outcome of human information processingis found at the pinnacle of the pyramid. This very ambiguous word refers to the richer experience that may be had by linking certain forms of information across time, contextualizing them, explaining their origins, and tying them to human values and norms.Therefore, as one moves toward the bottom of the information pyramid, or the base of bits and bytes, information processing utilizing ICT increases the amount of information while diminishing its quality. Using ICT will increase quality as one moves up the knowledge pyramid in the other manner. However, as one gets closer to the top of the pyramid, climbing it becomes more difficult. To go on to the next level, an increasing amount of data pollution or information overload must be eliminated. Therefore, the adoption of ICT as such does not ensure better information quality. It does provide us more chances, but the only way we can take advantage of those opportunities is by concurrently making more and better choices.

The quality of communication may be balanced in a manner akin to that. The new mediums significantly enhance the ability to communicate quickly across great distances. There are being built more, better, and quicker routes of communication. This does not imply that communication has entirely improved. According to Kubicek and Rolf, traditional relations of communication are physically constrained but comprehensive in content, while contemporary connections are spatially constrained but global in scope. The selective amplification and limiting of communication capacity have been noticed in this. The development of communication channels may lead to their usage for briefer and more fleeting forms of communication. Consider the majority of online discussions and the majority of phone calls: the ease of connecting encourages small talk. Additionally, as will be discussed in the social-psychological, communication may be constrained by the capabilities of the new channels.

Questions concerning information and communication's effectiveness are implied, among other things, by an evaluation of their pragmatic character. What connection does there exist between costs and yields? According to Van Cuilenburg and Noomen, the value of information decreases with time. When the point of satiation is achieved, human behaviors become very insensitive to further input. Exists a correlation between this and increased communication? Both yes and no. The key distinction between mediated communication and information is that since expensive infrastructure must be built, the initial costs of mediated communication are substantially greater than the rewards. The investment's expenditures are recouped after a while. The marginal returns

then sharply rise. Therefore, it would seem that efficiency is the most crucial aspect of better communication facilities.

It would be incorrect to believe that time and capacity are no longer significant. On the contrary, they gain importance, notably in business dealings. For instance, it was greatly improved when foreign stock markets were connected online. The transmission delays between these markets could never be quick enough when they were implemented, however. Second-level precision is essential. While the quantity of financial transactions increases concurrently, significant expenditures have been required to boost transmission speed. The same holds true for data transmission and processing times between businesses. After a while, communication links are also subject to the law of diminishing returns. The content of messages will likewise exhibit this phenomenon. The urge to be within reach at any time and place will result in different types of overcommunication, such as picking up the phone or a similar gadget too often and chatting for too long. Nobody keeps a message backup. The result is that a lot of communication was unnecessary or could have been done in a considerably shorter amount of time. Communication in many situations seems ineffective, even if it could have met a crucial emotional and informal need[10], [11].

CONCLUSION

In conclusion, In the digital era, the amount and quality of new media material have significant effects. The availability of material offers chances for customization and a variety of viewpoints, but it also raises issues with legitimacy and information overload. For meaningful experiences, educated people, and the credibility of the media sector, high-quality content is crucial. To make sure that the digital environment delivers meaningful and enriching material for everyone, it is necessary for content producers, media organizations, and viewers to work together to strike a balance between quantity and quality.

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CHANGING MEDIA USE: ADVANCE DIGITAL TECHNOLOGIES

Neha Saroj*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-neha.saroj@presidencyuniversity.in

ABSTRACT:

The advent of digital technologies and the widespread availability of internet access have brought about significant changes in media use patterns. This chapter explores the dynamics and implications of changing media use, examining how individuals engage with media content, the rise of digital platforms, and the impact on traditional media industries.Media use refers to the consumption and engagement with various forms of media, including television, radio, print, and digital media. Traditionally, media consumption was characterized by passive consumption, with audiences receiving content through scheduled programming or print publications. However, the digital revolution has transformed media use into an active and interactive process, empowering individuals to choose, create, and share content.

KEYWORDS: *Digital Media Consumption, Media Literacy, Media Multitasking, Mobile Devices, Online Streaming, Personalization.*

INTRODUCTION

In past years, the crucial elements of digital culture were emphasized. The utilization of media in the network society will be the focus of our attention in this. A considerable change in how people use media on a daily basis is possible because to the characteristics and communication capabilities of new media described in point 1 above. Integration or convergence properties lead to the creation of previously unheard-of multimedia approaches. It also causes a change from analog, independently used print and audiovisual media to electronic, digitally integrated media. Media may now be used much more actively or successfully thanks to interactivity. It is now feasible to link media in whole new ways, such as via hypermedia and user-to-user transmission of music, pictures, and movies. This is made possible by the technical underpinnings of computer networks and digital code. When taken as a whole, these characteristics will drastically change how media consumption and digital culture are seen in the future. I decipher and synthesize these alterations in this by examining numerous patterns[1][3].

The first tendency is the process of convergence, which was a significant problem in the early years of this book. Telephony, data, and mass communication are believed to converge at some point, resulting in the ultimate fusion of all digital media into a single medium. I think both ideas are incorrect. They erroneously believe that the convergence of technology would automatically lead to the convergence of social practices and ordinary media consumption, ignoring the trend toward media differentiation that is equally perceptible in contemporary culture. Televisions and

mobile phone screens may display websites and emails. Voice over IP makes it possible to make calls online. But do these programs meet users' needs in their convenient environments? 4 reported while watching TV entails gathering with people to view large screens in a living room or bedroom, usually for entertainment. In environments intended for these activities, people who use computers and the Internet often type on keyboards while staring at a small screen for informative, communicative, and work- or study-related purposes. Mobile phones' popularity shows that it doesn't need fixed cameras, but rather mobility.

The tendency of social and cultural heterogeneity seen in contemporary society is incompatible with a united media environment. Expecting one medium to support all applications and use scenarios is unreasonable. In actuality, a wide range of socioeconomic strata, age groups, and cultures continue to make use of both complex and simple variations of the same media. As I shall show later, even diversity is increasing.Another generally believed notion is that new media will displace traditional ones. This has often seemed to be false throughout the history of the media. The most well-known example is the TV, which many people thought would eventually replace the movie theater. Many people now think that digital media, including computers and the Internet, will eventually displace traditional media like print, television, and radio.

One of the reasons for this limited degree of replacement is the growing multifunctional utilization of all media. In the past, each main type of media was used for a certain purpose: television was used for entertainment, newspapers and magazines for news, books for education, telephones for communication, and computers for data processing. All of these mediums have become more adaptable as a result of the advancement of electronic, digital, and multimedia technology. Television becomes a more educational medium with teletext, continuing news and current affairs programs, and different banners, boxes, and subtitles on the screen.Despite losing some of its appeal, radio has changed into a background medium. More pictures, short stories, lifestyle pieces, and fiction are now available in low-cost paperbacks, increasing the entertainment value of newspapers, journals, and books. These days, telephones may be used to access mobile information, games, photographs, and even video or television. The computer has transformed from a device for crunching numbers into a flexible informative tool. The Internet continues to be one of the most adaptable media platforms ever developed.

The functions that old and new media play in information, communication, business, entertainment, sociability, education, and identity development are all becoming more and more intertwined. They ultimately start to perform similarly. Different media are integrating more and more in today's networked society, and when they can't, they refer to one another via services and programs.As a consequence, the differences across the media do not always disappear. Instead, the value of their distinctive communication abilities increases. When choosing their media, people are getting more selective. The circumstances around this choice are changing more and more. Soon, information and a wide range of media will be nearly everywhere. Only the most effective medium for a particular need in a certain setting can grab our attention and persuade us to use it. Here are a few examples. We want a little TV, book, or magazine in the bedroom and a home theater in the living area. In the kitchen and the car, we prefer to listen to a less distracting radio or audio set. While we are going, we want to send and receive all necessary information, or take it with us. The most modern information and communication tools we need

for work are computers and the Internet. Alternative media and links are usually accessible, therefore these media aren't always used entirely in these situations. Multitasking with media is getting more and more common, especially among young people. The population of the Netherlands, which is presented here as an example, at least, has not seen a general increase in media consumption diversity. Although more media are being utilized, communication time has not increased. It may surprise you to learn that not everyone utilizes the aforementioned capabilities to the same extent. Within the general variety that lasted between 1975 and 2000, a reasonably discernible trend was seen: people from higher social classes use media in a wider range of ways, whereas those from lower social classes use it less often. Most people believe that people in lower social classes no longer read newspapers and instead spend their days watching television.

The transition to electronic media and a digital culture implies that the various data types outlined in this book are evolving in terms of their forms and how they are integrated into multimedia. It does not necessarily mean that their content has changed, with the exception of the characteristics of digital culture discussed in this. It has been commonplace recently for printed material to simply be reframed in an electronic counterpart. Naturally, this necessitates new literacys, which this book refers to as digital skills. I want to emphasize that the decline in print media, for instance, does not always mean that people are reading less. They may read even more when all the media sources they use now are taken into account. They read text that appears on screens and in publications that also include visuals and numbers. I argue in Chapter 9 that there isn't a strong reason to bemoan the demise of print media. The same is true when mediated communication is used to partially replace face-to-face conversation. This shift has advantages and disadvantages.

One illustration of how changing media formats are impacting media content is the rise of hypermediation. Hypermedia in general and hyperlinks in particular will bring about a revolution in how media is utilized. Only now have we begun to comprehend their importance. Traditionally, media have been offered for sale as discrete goods, such as devices, single pieces of content, content bundles, services, and programs. Users become processes for information retrieval, communication, and pleasure in hypermedia as they move across media networks. The distinctions across the different media will be less pronounced. As we have started to do with search engines on the Internet, fewer of us will visit libraries to check out piles of books, instead opting to consult an electronic library and search through several sources to get the information we need.

Pages, not people, are connected via links between websites. They will substitute associative modes of perception, processing, memory, and learning for a greater portion of the information that is now received and processed linearly. In paragraph nine, I argue that this may considerably aid learning. There is another side to this chance, however. The selection potential of new media is substantially supported by hypermedia. They provide a plethora of excellent new tools for finding, processing, and capturing content. In order to avoid being overwhelmed by the wealth of sources and information accessible, users must be extremely specific about what they are looking for. A sizeable section of the world's population just lacks the advanced knowledge abilities required for this, even in societies with high literacy rates[4][6].

As a consequence of digitalization, interactive media are becoming increasingly common in the broader category of accessible media. As a result, media consumption is probably going to become more participatory. Perhaps the engagement levels suggested in point one will also increase. The bandwidth of the two-way channels increases. Interactive media is becoming more and more synchronous. Menus provide a variety of choices. Users may engage more in central exchanges like chat rooms and interactive TV broadcasts. If they are able to speak with one another through videoconferences and other such technologies, even the level of understanding may increase.

However, it is not certain that people will seize these opportunities. Many developers of interactive software and media wonder if user participation is really essential. Many media consumers prefer to read, listen, and watch in a relatively passive manner and do not want to make any original contributions. Their needs are met by choosing from extensive menus. For instance, a tiny proportion of Internet users regularly exchange music and video files, run their own websites, engage in discussion forums, or keep personal online diaries. It's conceivable that viewers who were raised in a society where media consumption was mostly passive will need some time to adjust to the phenomenon of media interactivity.In the first of these, it was claimed that the assumption that there is greater innovation in digital culture has to be qualified. When compared to analog media, it resembles a collage more, editing and modifying the current content.

Another common misconception is that in the age of digital media, middlemen like publishers, editors, and service providers are less common or perhaps redundant. When choosing and modifying material, users are required to use independent judgment. This idea is also untrue. In the too wide and confusing current media landscape, individuals need help now more than ever. The rise of portals, information agents, communication services, auctions, and exchange servers for peer-to-peer networking online is evidence of this desire.In actuality, there is a transition from broadcasting to narrowcasting, from homogeneous audiences to mass marketing, from audience segmentation and customization to user or customer personalization and media content customization. After the era of segmentation, which resulted in a large diversity of channels and media products for different target groups, we are now entering a time of attempts at a one-to-one approach in customised media forms and content. But far than signaling the end of intermediation, this is only the start of a variety of new services that will assist customers in making choices.

DISCUSSION

Disciplines like media studies and media psychology thought the impacts of the traditional media, such as broadcasting, the newspaper, and communications, on the human mind were astounding throughout the 20th century. Nevertheless, they can seem inconsequential in light of the implications of new media in a networked context. The mind-seizing qualities of interactive media, multimedia, and hypermedia as well as the human mind's absorption in online settings and virtual worlds must have a significant influence on our mental health. What effect, one would wonder?We live in a world that is becoming more and more mediated, which is obvious. Environments and mediated experiences have progressively taken the role of traditional direct experience and physical connection with the world. This process is accelerated by new media.

What impact will it have on how we see the world and how we communicate? Will interfaces with a world of pictures, artificial models, and simulations replace direct engagement with a real environment? Will audiovisual, graphic, and computer language replace spoken, written, and nonverbal forms of communication?

How will the new media affect our emotions and thought processes? There are so many similarities between humans and computers, the technology that drives all new media, in terms of how they process information that researchers studying artificial intelligence and some psychologists contend that there are no fundamental differences between the two, and that it is only a matter of time before intelligent machines on par with humans become a reality. According to the opposing viewpoint, there are fundamental distinctions between people and computers that alone may account for the present conflicts in human-computer interaction. What viewpoint is correct?

CMC has been accused of having an antisocial and/or apathetic attitude. There were worries that CMC might encourage Internet and computer addiction and worsen feelings of loneliness. To develop and preserve social connections and identities, as well as for extremely private and intimate activities like online dating, individuals have started utilizing computer networks in the last couple of decades. In terms of communication richness, is CMC really inferior to face-to-face communication?What long-term consequences do computers and other modern media consumption have on our personalities? There is a lot of conjecture about this. We could evolve into cyborgs, which are hybrids of humans and computers. Computers may act as a second self, according to Sherry Turkle's old notion. It is undeniable that our interaction with the media has changed. we now approach it like a person. Are we able to maintain our distance from the new media, or is this even more the case?In the sentences that follow, I first discuss how new media affect perception before discussing how they affect human cognition and learning. Then, CMC comes into emphasis instead of human-computer interaction. Finally, topics related to identity and personality are covered.

Conceptualization and New Media

There is always some form of intermediary between people and their perception of reality in any mediated communication. We are dealing with a medium-human monologue in allocution. The patterns change to a medium-human discourse during consultation and registration. This transitions into a human-to-human-to-human chat, or polylogue, in the conversational pattern. In each of these situations, mediated and technologically supported or influenced perception takes the place of direct experience. Direct human experience has always included the simultaneous observation of reality via all the senses. This includes chapter concepts as well as information, skills, attitudes, and emotions. In contrast to this, mediated interactions always come with unique limitations. It is difficult to employ all of your senses here. Some information may be acquired, whereas other knowledge cannot. Specific abilities are applied. One media is ideal for transmitting emotions, ideals, or chapter concepts, whereas another is wholly ineffective in doing so[7][9].

Of course, these media also provide enhancements to experience in contrast to all the limitations of the old and new media in terms of direct experience. According to a well-known McLuhan

quote, media are extensions of people. They increasingly assist us in overcoming the constraints of time, geography, and information scarcity. These sorts of assistance cannot make up for all constraints, although this is not always a problem for certain uses, such as formal and commercial communication. Additionally, as is discussed below, the inventive human mind is capable of bridging the gaps.The partial pre-programming of perception and experience via the use of media is a second facet of the shift from direct experience to mediated perception. This is clear in terms of allocution. It explains why there have been so many research done on the impact of TV. In certain ways, perception is pre-programmed during consultation and registration. The communication capabilities and practical uses of the medium in question limit or improve mediated discourse.

Therefore, the transition to mediated perception involves tradeoffs between qualities of comprehensiveness, freedom, and the individual's own initiative.According to Bruner and Olson, three forms of experience correspond to three types of learning:

1. The enactive mode is appropriate for direct action learning.
2. The iconic mode is appropriate for visual model observational learning.
3. The symbolic mode is appropriate for learning in symbol systems.

The first of these naturally transitions to the other two forms of learning as we go from direct experience to mediated perception. On the one hand, we may claim that this has no bearing. The same fundamental knowledge structure may be provided by any of these different learning modalities. Conversely, information acquired in one modality cannot be acquired in another. Instructing through language is limited to rearranging, ordering, and differentiating knowledge or information that the listener already has access to from other sources such as modeling or through his own direct experiences. Symbol systems merely allow us to process knowledge we have acquired in other modes. Similarly, complex activities cannot be easily replicated unless the performer already has a working knowledge of how to accomplish them. This statement also applies to learning via visual models. It is impossible for someone to replicate wholly foreign behavior. Knowledge is ultimately connected to human experience. Additionally, learning via language and models always necessitates the development of certain abilities first.

All three of the experience and learning modes are given new opportunities by the new media, although the iconic and symbolic modes are far more affected than the enactive mode. The earlier forms benefit from a variety of features including slow motion, rewind, quick forward, or searching, as well as from new methods of information presentation that include menus, windows, hyperlinks, graphs, and other visuals. Additionally, using many languages and/or codes simultaneously is made simpler by the mixing of visuals, sounds, text, and data. By relying on the other two modalities of experience, new media will only artificially encourage learning via action. This is accomplished via simulations or pre-planned practice and training.Overall, though, using new media will hinder learning via direct experience much more than using traditional media did. Heavy reliance on new media might result in a decline in this kind of learning since direct action continues to be the foundation of human experience.

This assertion will be better understood by way of certain instances. You'll get a better sense of a product by using it in a store than by reading about its specs online. Medical diagnostic technology won't be able to fully replace physical exams by doctors for a very long time. Iconic and symbolic experiences often don't encourage engaging with the medium in question. A comparatively passive style of perception will predominate, with considerably more being read than being written, heard than being spoken, seen than being educated, and far more being used of a gadget or program than being calculated or measured. The old media had already begun this evolution, which the new media will carry on. The 'weight' and complexity of the medium itself are first increased, even when interactive new media provide greater chances for active inputs and choices by local units. Before any active input can be accomplished, a lot of watching, reading, listening, and operating has to be done. This also does not promote such input when there is a surplus of data and instructions.Modalities of symbolic communication and mental abilities must change.

The linguistic, social-geographical, iconic, logicalo-mathematical, and musical types of symbolic communication have been distinguished by Gross. These broad forms of communication and their details have undergone many changes throughout human history. For instance, there are oral, written, and audiovisual variations of the language mode. In this order of precedence, they were the dominating ones. In the first and second communications revolutions, certain modalities of communication, or their variations, have gained importance while others have lost it. In western civilizations, the relative significance of the social-gestural and oral-linguistic modalities of communicationwhich every human being learns as a childhas declined. The written-linguistic mode first emerged, followed by the audiovisual-linguistic, logical-mathematical, and iconographic forms.

Changes are once again happening in the new media. The audiovisual version is overtaking the oral and written variants in terms of relevance within the language mode. This also covers the emergence of iconic design in the form of cinema, photos, s, graphs, windows, and other visuals and images. This highlights the prominence of the screen and the emergence of an image-based civilization. Additionally, the logical-mathematical mode is becoming increasingly significant. Data processing is dominated by computer processes, as are all forms of software and operating instructions utilized in CMC. The musical style still plays a significant role in new media, but it can no longer stand alone. Images are increasingly used to accompany music. Additionally, radio music is lowered so that it can support other activities.

The new media pays the least attention to nonverbal communication. Whereas face-to-face contact has been replaced by mediated communication utilizing simply voice, text, or data, it has vanished. The nonverbal form of communication has lost ground to verbal or linguistic means of communication, despite the fact that it partially returns when video begins to communicate faces and bodily movements through new media. The fact that the intelligentsia continuously laments the demise of printed text should not be used as a way to hide the reality that reading is becoming more and more of a need in new media, and that vocal modes continue to acquire relevance even when it comes to multimedia. Because spoken and written words have more audiovisual and iconic backing in new media, it is believed that reading is becoming less significant. This makes it possible for some individuals to focus on this assistance while ignoring

the words.The expanding integration of the communication channels employed in new media is the fundamental trend. The modalities of communication are integrating as a consequence of the incorporation of pictures, sounds, texts, and data into a single medium, and the resulting multimedia combinations gain a power of communication unheard-of in human history. They will mostly have an unpredictable impact on how people see and think. Nevertheless, a number of assumptions may be drawn from the psychological effects of established communication methods used in previous media.

Gavriel Salomon outlined the psychological distinctions between symbol systems in his seminal work Interaction of Media, Cognition and Learning. This phrase is analogous to the earlier discussion of communication channels. It is drawn from Goodman's work. Salomon makes the following four distinctions, which he links to the psychological impacts of using modern media. Every communication method or symbol system is best suited for transmitting a certain kind of material. The language mode, for instance, is utilized to provide explanations, the iconic style to illustrate or communicate ideas, and the nonverbal method to convey emotions. The greatest way to convey chapter ideas, arguments, and all other crucial conversation elements is via language. Mediated pictures are mostly useful for providing a direct perspective of reality or for explaining concepts using a specific visual language that are often invisible to the human eye.

There are two types of symbol systems or communication methods: notational and non-notational. They either include signals not clearly pointing to a specific object or issue, such as many pictures with their diverse and sometimes unclear meanings, or they contain a collection of notations for the specifically identified, referred-to things. The iconic and nonverbal modes are not notational systems, although the logical-mathematical mode and the musical mode are. Since there are many different interpretations of spoken and written words, the linguistic mode is somewhat notational. The tight notational computer language and the increasing integration of texts, pictures, sounds, and data in new media, especially multimedia, cause the linguistic mode to become less ambiguous. The audiovisual language mode and the iconic mode are combined in multimedia. Overall, it seems that notational symbol systems or modes are becoming more complex in new media. This will have significant ramifications. It is well known that notational systems need more sophisticated mental processing than non-notational ones. It is necessary to learn the proper codes and repeatedly apply them thereafter. The gap between symbols and ations in a person's mind is less in non-notational systems.

The left side of the brain processes notational linguistic, logico-mathematical, and musical-written forms of communication more efficiently than the right, which processes non-notational nonverbal, iconic, and musical-auditive modes predominantly but not solely. Therefore, the left side of the brain will often be more attracted to new material. The anticipation of an integrated new media's far greater simultaneous appeal to both parts of the brain, however, is significantly more significant. Through their ties, both sides must engage in an intensive discussion. This requires complete mental growth. A fully developed visual, auditory, verbal, logical, and analytical mind is required to take full use of all the potential presented by modern media. Naturally, this will make the needed mental tasks more complicated. But three other significant elements affect how difficult this is:

1. The relationship between age, education, and experience as it relates to an individual's cognitive growth.
2. A person's cognitive preferences for how they like to perceive words, pictures, sounds, or data.
3. Study, information retrieval, communication, or entertainment are some of the more or less taxing jobs.

In conclusion, a fully developed and adaptable mental growth as well as the multifunctional use of their capabilities are necessary for an optimal use of the new media.One and the same material might have many interpretations depending on the style of communication used. Speeches may have meanings that are different from their exact transcriptions when they are listened to. Since the contents are identical in every way, it is the receiver's abilities that are to blame rather than the contents themselves. These in turn rely on two elements: the receiver's foundational knowledge and the information's novelty.The recipient will be less receptive to the proposed communication method the more familiar they are with the world. This indicates that those with less education rely more on the medium of communication in question than do those with more education. Since there are now more possibilities for means of communication, this must be very relevant to any launch of new medium.

Almost all psychological research demonstrates that reading generally has a more appealing but not necessarily bigger appeal to our mental efforts than seeing audiovisual communications, in spite of all the clichés about the stultifying influence of contemporary visual culture. Reading calls for conceptual thinking, which goes beyond perceptual reasoning. Based on these assertions, we may predict that media with audiovisual presentations would be easier for less educated individuals to access than media that mostly uses text and statistics. Media would also be less educational for them than for more educated individuals since the latter are less reliant on the specific medium of communication supplied and they get more from the growing amount of text and data.

The various forms of communication not only appeal to mental abilities in different ways, but also aid in their development in various ways. They need to be strict and push the receivers to advance their talents in order to achieve this. However, there are a number of communication methods, especially non-notational ones, that let the recipient choose the path of least resistance. 'Unlike a written or spoken tale, the graphic structure of television allows for shallower processing. In general, certain symbol systems could allow for simpler mental processing while others would need for more mental elaboration. Non-notational symbol systems demand primarily fluid ability, based on spatial and perceptual abilities, whereas notational symbol systems require crystallized ability, based on language skills.

All of this is pertinent to new media. Theoretically, they may aid in the development of mental abilities more effectively than the majority of traditional media since they include several communication channels. In actuality, they need fully developed mental abilities and a multifaceted approach. They don't have to be used to their full potential, which is the issue. The new media's integration of communication channels may also be accessed independently, allowing for a considerably more limited usage. The power of the audiovisual and iconic modes

provides applications that might be used without stimulating the cerebral processes necessary for notational symbol systems. The use of charts, graphs, or pictures could save mental effort and improve knowledge acquisition, but it will impede skill development, the author writes. A excellent illustration is the switch from a phone to a videophone. The discourse may be understood more readily since the latter provides more clues. No matter how one-sided these talents may be, those who must depend on one or two channels of communication must have the necessary skills. The written language mode has up to now provided the clearest example of this.

So, a contradictory circumstance develops. The new media both assist and simplify human perception and cognition while also adding to their complexity on the one hand. Therefore, what occurs is determined by the user's job and objective. Studies show that when parents or courses for achieving educational objectives are present, children learn more while watching television, such as Sesame Street. People with higher levels of education will generally be more eager to 'do' with new media than those with lower levels, therefore the former will profit more and strengthen their cognitive edge. The utilization gap has this as its primary psychological root[10][12].

CONCLUSION

In conclusion, the way people interact with media material is changing as a result of digital technology. As digital platforms have grown in popularity, people now have more freedom to choose their own material, actively participate in media consumption, and communicate with others online. The usage of new media has increased convenience and options for self-expression, but it also comes with problems including information filtration and the destabilization of established media companies. To fully capitalize on the advantages of changing media usage patterns and manage any possible negatives, media companies, people, and society must comprehend and navigate these changes.

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NEW MEDIA COGNITION: UNDERSTANDING THOUGHT DYNAMICS

Padmavathi S*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- padmavathi.s@presidencyuniversity.in

ABSTRACT:

Cognition, the process of acquiring knowledge and understanding through thought, plays a crucial role in how individuals engage with and process information in the context of the new media landscape. This chapter explores the dynamic relationship between cognition and new media, examining how digital technologies, online platforms, and information overload influence cognitive processes, information processing, and the acquisition of knowledge.The emergence of new media, including the internet, social media, and digital devices, has revolutionized the way individuals' access, consume, and interact with information. These technologies have created an abundance of information and have significantly increased the speed and accessibility of content. As a result, cognitive processes, such as attention, perception, memory, and decision-making, are impacted by the characteristics and affordances of the new media environment.

KEYWORDS: *Attention Span, Cognitive Load, Digital Literacy, Information Processing, Media Effects, Media Multitasking, Memory Retention.*

INTRODUCTION

In this, I'm mostly worried with how the new media demand the mental synthesis of an ever-increasing amount and heterogeneity of information as well as the integration of face-to-face and mediated contacts. People are exposed to an unparalleled combination of traditional and digital media. The human ability to process information has no set boundaries. it is exceedingly elastic. It is important not to overstate the impact of issues like overcommunication and information overload. However, issues develop if we start combining duties that don't naturally go together. In the new media, technology communication and data processing are increasingly assisting and, in some cases, taking the place of human communication and data management. The crucial questions then become whether these modes of processing and communication resemble one another and if they are able to build a mutually beneficial connection. If the responses to these two questions are overwhelmingly good, there is no need to be concerned about any particular difficulties in adjusting to the new media on a mental level. These media will develop into incredibly practical instruments. However, issues are sure to develop when the response is predominantly negative. In the second scenario, there will be restrictions on and difficulties with human-to-media/computer contact[1][3].

It is clear that processing and communication tasks carried out by humans on the one hand and by media/computers on the other have commonalities and may have connections. There are valid

reasons why computers are utilized as a metaphor to describe the human mind. Computer jargon heavily utilizes terms borrowed from this source, such as information, processor, and memory. The same holds true for words like interaction, interface, conversation, sign, and command that are derived from human-to-human communication. Terms deriving from human perception, symbolization, and ation of reality predominate in media technology jargon. Human vision, cognition, and communication may be seen as being extended by or even replaced by media and computers. They transcend time and space and lessen the impact of the restrictions our body and mind place on us.The fact that human perception and cognition are positioned physically in a concrete environment accounts for the most fundamental distinction. A human being's interaction with its surroundings is dynamic and independent. For the flexible perception and cognition in the so-called perceptual cycle, this is of utmost significance. The fundamental tenets of this perceptual cycle are perceptual processes governed by dynamic mental schemata. The direct intentionality of the human mind is what causes this.

The wants and ideals of people as biological and social beings in a given setting serve as the inspiration for intentionality.Gerald Edelman, a neurobiologist, and his Neurosciences Institute operate on this fundamental tenet. The five distinctions discussed in this are strongly supported by Edelman's work, which was compiled and made famous in his books Bright Air, Brilliant Fire: On the Matter of the Mind and A Universe of Consciousness. The idea that the human brain may be likened to a computer or to a power plant of neurons is rejected by Edelman, contrary to the majority of cognitive psychologists. According to him, it is more like an organic jungle made up of constantly shifting groupings and connections of neurons that are unique to each and every person. Genes only partially determine them. The requirements that every human being seems to have in their continual interactions with the environment result in a Darwinian selection process for new neurons, which constantly alters the human brain. These demands cause a process of trial and error that changes the brain. Contrary to what most cognitive psychologists believe, the functioning of the human brain should not be divided into those of hardware and software. According to Edelman, neurobiology can explain the whole human brain and mind, but clearly not specific ideas.

On the other hand, perception and processing in computers or other media can only begin with a derived intentionality. Computers are only used to show or duplicate programs that have been programmed by others. One of the most significant cognitive psychologists of the modern era, Jerry Fodor, once said in an interview that for a computer to have intentional states, it would need to be a robot of some kind. Computer processing operates on the concept of programmed instruction followed by algorithms rather than neuronal selection as in mental processing.Media and computers are programmed for a variety of environments and purposes. As a result, they are rather contextless and chapter. They have a purpose and adhere to the human mind's paradigm for logical planning. This concept has received harsh criticism from Lucy Suchman in her book Plans and Situated Actions. Suchman found that people do not utilize contemporary electronic equipment in accordance with a predetermined plan, as the designers of this equipment anticipate, based on her empirical and anthropological examination of how people use this technology in daily life. Plans for human behavior and thought do not correspond to the reality of situated action, which Edelman argues is motivated by brain selection in response to demands. Plans, in Suchman's opinion, are essentially anticipations and reconstructions of events. They are

a mode of thought, not a practical course of action. Situated action is an emergent property of moment-to-moment interactions between actors and between actors and the environments of their action, according to the definition given above. The four aspects of this interaction go much beyond the three degrees of interactivity that computers and media have so far been able to provide. The fourth and greatest degree of interaction identified in 1 is really interpreted by these qualities[4][6].Mutual understanding between the parties is a need for normal human connection. In full-fledged contexts, this knowledge is impacted by strong collaboration and communication.People have developed general communication skills in these settings that are intended to increase sensitivity to specific partners and social contexts.Face-to-face communication offers tools for identifying and resolving communication problems.Human communication is rooted in a background of events and situations and draws on it.In contrast to this, the following issues are what characterize human-computer interaction. Typically, a person can only partly comprehend what the hardware or software intends to do and why. Even less does technology and software 'understand' what drives a person. Software and equipment operate according to broad schemata that are mostly unresponsive to unique users and situations. Equipment will often fail to recognize communication issues, much alone resolve them. In the end, the background information built into computers and other media is not comprehensive and deep enough to enable the wide variety of possible contextual activities.

Of course, these issues have been under investigation for a long time by software engineers and leaders in artificial intelligence. Some attempt to increase user transparency with regard to hardware and software. Others aim to provide users with tools so they may include their social networks, including their coworkers, in addressing issues with human-computer interaction. Additionally, a variety of intelligent tutor systems and user models that are created from observation of the users' subsequent input are available. These systems should enable the computer to some degree infer the user's knowledge and misunderstandings. Finally, to allow them to interpret certain events, computers are increasingly furnished with scripts of precise scenarios with a uniform look. Hardware designers strive to provide greater context for human cognition as well. Multimedia environments are more difficult to discern from reality than settings produced by traditional media, like TV, due to the integration of several data kinds and communication mechanisms. This is especially true with virtual reality media that was developed to thoroughly immerse consumers in synthetic surroundings. These cutting-edge designers' solutions to enormous issues accurately capture the fundamental distinctions between human contact and engagement with computers or other media.

Human experience also significantly depends on being physically present in a material world. This is 'holistic' in a certain sense. People build a thorough understanding of reality via a variety of diverse and active relationships with their environment, the simultaneous use of several senses, and a variety of unique mental schemata and general conceptual models. We can only really understand the total human experience when we take into consideration the connections between these schemata or models and the wants, urges, and emotions that also have an impact on them. This is because their neuronal selection processes all contributed to forming this complete vision. This sensation is obviously selective, yet this is how humans simultaneously see and analyze things. Human perception and development do not occur in a step-by-step or linear manner. Humans initially perceive the entire with all of its internal relations before moving on to

the specification of aspects because of their physical makeup. That's how we can instantly know someone's face even before we see other features, like their eyes.

The way that computers and other digital media work is the oppositethey follow the concept of teaching. They operate with an atomizing perception, taking in information one piece at a time. Then, a piecemeal transfer of these data will result in a step-by-step algorithm-based processing. Perception and cognition are so distinct. It is a sequential, linear process free from arbitrary associations, desires, and feelings that are unprogrammable. These underlying differences in vision and cognition are to blame for the many issues that arise when people engage with computers or other media, as well as when efforts are made to have computers understand human language. They will only be partly resolved for the time being. This holds true for computers that operate in parallel, as well as current neural networks and upcoming neural computers that superficially resemble the functioning of the human brain.

The term total experience also refers to perception, interpretation, and engagement within dynamic environments. The majority of efforts by programmers and specialists in artificial intelligence to address the issues previously stated focus on adding some form of context to the programs and the presentation on screens. Visual overviewsmenus from which options may be selected with a mouse clickhave partially supplanted traditional languages that solely used commands. Displaying several windows on a single screen was the next stage. Every window has its own context. It might overlap, merge, or link to another window. The interaction with computers and other screen-based media may thus be enhanced. Making hardware and software that better integrates with or connects to the language and senses of people in their natural environments will be far easier than creating settings. Speech recognition, graphic presentation methods, and pre-programmed scripts explaining linguistic settings have all advanced significantly in recent years.

All of these strategies are helpful, but they won't help you fully solve the difficulties. For instance, voice recognition only makes human-computer interaction simpler by substituting an audible language communication method for written and logical-mathematical modalities of communication. Another example is the independently running windows seen in modern window systems, which fail to adequately contextualize users' vision and thought processes. Programming contexts into scripts, another suggested approach, would always be insufficient since there are an infinite number of relevant facts that may be used to fully describe a context in principle. One the one hand, without a larger context, it is impossible to discriminate between important and irrelevant material. However, without a final context that does not need any additional explanation, there will be an endless regression of contexts, and you will never be able to begin formalizing important facts. Computers and other media significantly outperform human perception and cognition in various sectors. However, these technologies will never be able to perfectly replicate the total human experience and in-person interactions. According to contemporary neuropsychological theories, the fundamental rationale is that human experience and consciousness are rooted in physical and mental sensations of what occurs within and outside the body.A collection of dynamic schemata, referred to as mental maps by Edelman, govern human cognition. ‘It drives movements and exploratory actions that make new

information accessible, by which it is further transformed. The schema absorbs information as it becomes available at sensory surfaces and is altered by that information.

DISCUSSION

Operant and intelligent learning versus 'intelligent' learning. Schemata are therefore to some degree fixed without being fixed. Humans are able to learn and think creatively because of this. Computer programs, however, as well as several other media applications, are more or less static. The human nervous system is capable of a nearly limitless number of states, but computers can only achieve a finite number. Computer programs are built on the premise that all human knowledge can be codified. Everything may be given in a framework made up of clear phrases connected by formal logical or mathematical relationships, according to this statement. The foundation are fixed shapes. They must then be modified into programs that are more or less flexible. Formalization, standardization, and all other forms of automatization are still very much present. The inevi communication failures in human-computer/medium connection are brought on by this. The capacity to recognize and correct mistakes via the use of a range of linguistic, contextual, and cognitive resources is a vital component of mutual comprehension in face-to-face human communication, and it is one that current interactive systems critically lack. This adage, which is 20 years old, still rings true today[7][9].

Software developers and specialists in artificial intelligence work to make up for this rigidity by developing tools that can 'learn' from communication breakdowns and mistakes. These intelligent applications are intended for mutual learning from mistakes and issues believed to be inevitabilities rather than for a more flexible communication between computer/medium and users.

Expanding the user's capacity for learning by raising the degree of engagement and integration characteristic of new media is another strategy for making up for rigidity. Numerous psychological studies demonstrate how interactive media and programs may help individuals learn more effectively and rapidly. For the reasons previously mentioned in this, these programs will never be as adaptable as the schemata of the human mind.The anatomy of the human brain is one of the causes of the variations in flexibility. Many psychological theorists believe that the triune human brain is an incompletely integrated whole made up of three elements that have collected through a lengthy evolutionary process. The limbic system, which is the source of emotions, the brainstem with its instincts and reflexes, and the neocortex, which is the source of intellect, are these sections. The final of these three components is the only one that computers are made to approximate. Developers attempt to replicate intelligent learning with these gadgets.

The previous explanation of the distinctions was only partially successful. Every aspect of human learning is based on neuronal selection processes that are motivated by real wants and values. However, computers' simulation of intelligent learning is the consequence of chapter, coded instruction. Additionally, intelligent learning does not totally control human brain function. Emotions and instincts are crucial. Neurobiologists have recently shown that emotions are necessary for human thought. The traditional Cartesian distinction between reason and emotion is erroneous. Operant learning, a trait shared by all animals, often outweighs intelligent learning in practice for humans. Operant learning takes place when penalized behavior is not

repeated and rewarded behavior is repeated. It is about quick effects and direct repercussions. It is learning for the moment. On the other hand, intelligent learning involves deriving conclusions from long-term effects. Planning is based on this. The remnants of primitive instincts and reflexes, as well as far more direct forms of operant learning, often impact, compete with, and even undermine human intelligence learning. And the majority of the time, this is not a drawback.

It makes it possible for people to act quickly while yet providing for a person's requirements.This fourth distinction is undoubtedly tied to traditional criticism on computer culture, despite the fact that it is not founded on the relevant psychology. Better explanations may be found for a significant range of events in interactions between people and computers/media from neuropsychology, neurobiology, and the ethnography of human-computer interaction. Suchman's discovery that people do not utilize this technology in a deliberate manner is one example. Additionally, a variety of ergonomic psychological observations are made, including physical indicators of tension and even fear in the event of a problem, keyboard reflexes, energy-intensive reaction times, physical hostility against computer equipment, and more. The theories created by Koestler, Maclean, and others can also be used to explain a variety of social-psychological phenomena in human interactions with media and networks - see The Social Psychology of CMC below - such as the uninhibited nature of CMC brought on by the lack of non-verbal cues and immediate sanctions.

Of course, this fourth distinction has been taken into account by software engineers. Operant learning components may be best incorporated into interactive programs. Following a certain input, they directly produce something, such error messages. However, this crucial didactic concept does not assist to eliminate the aforementioned ergonomic phenomena or the issues that arise when intelligent and operant learning are combined.Language-based interpersonal communication is necessary for human intellect. Mutual understanding would be hard to achieve without it. But whether artificial, technologically mediated language is usedone that has been programmed and transmitted by computers and other mediamakes a significant impact. Artificial language developers are still struggling to fully and satisfactorily tie their languages to those of humans. The main arguments were covered before in this. In reality, it is incorrect to refer to conversation and communication in human-computer interactions. However, utilizing media, people have attempted to make their natural social communication more favorable.

Throughout the course of human history, technologically mediated communication has both supplemented and, in some cases, totally supplanted natural forms of social communication. In other words, the communication process is molded technically in one or more of its components. The sender, the message, the medium, the channel, and the recipient may all be considered in this. The substance of the communication process and the way in which information is processed mentally may both be significantly impacted by this technological design. There may be both an increase and a reduction in the quantity of stimuli for mental processing. This will virtually always be the case when considering face-to-face communication as a normative reference point. However, because the comparisons are unfair, this may be referred to as the bias of face-to-face communication. In truth, there are a lot of drawbacks to this sort of communication as well, which may be avoided with technologically mediated communication. A study of the reduction

and rise in cues that the technological components of a communication process bring about constitutes a fair comparison[10][12].

CONCLUSION

In conclusion, the properties of digital technology and online platforms influence cognitive processes and information processing, demonstrating the close relationship between cognition and new media. Cognitive functioning is hampered by information overload, the propagation of false information, and the participatory nature of social media platforms. However, modern media also provides chances for learning, skill development, and cognitive improvement. Understanding these dynamics and promoting strategies and policies that support critical thinking, digital literacy, and the efficient use of new media for cognitive growth and knowledge acquisition are necessary for navigating the cognitive landscape of the new media environment.

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SOCIAL PSYCHOLOGY OF COMPUTER-MEDIATED COMMUNICATION

R Ravikumar*

*Associate Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id- ravikumar.r@presidencyuniversity.in

ABSTRACT:

Computer-mediated communication (CMC) has transformed the way individuals interact and communicate in the digital age. This chapter explores the social psychology of CMC, examining how the unique characteristics of online communication platforms influence social interactions, self-presentation, group dynamics, and the formation of social identities.CMC refers to the exchange of information, ideas, and emotions through digital channels, such as social media, instant messaging, online forums, and email. The absence of nonverbal cues and physical presence in CMC poses unique challenges and opportunities for social interaction. The social psychology of CMC investigates how individuals perceive, interpret, and respond to online communication, and how these interactions shape social behaviors and attitudes.

KEYWORDS: *Anonymity, Communication Patterns, Cyberbullying, Impression Management, Online Communities, Online Identity.*

INTRODUCTION

Modern learning opportunities made possible by modern media are partially due to an increase in stimuli. They have a lot to offer in terms of advancing didactics in particular and education in general. These prospects result from the interaction and integration that serve as the new media's two defining traits. The synopsis below demonstrates a considerable potential. The new media's interaction allows for a more active and independent style of learning than we're accustomed to. Interacting with and via these media simulates rather than matches the higher sort of active learning. As all three learning styles currently use media, the enactive, iconic, and symbolic learning modes may be blended in this fashion. Through these methods, pupils are given the ability to study independently, and instructors are given new responsibilities. Teachers have always imparted vast quantities of knowledge. They will mostly serve as tutors for students in the future who are taking distance education courses independently while seated in front of a computer in a classroom or at home. Our educational system will undergo a total, unprecedented transformation as a consequence. It will take at least one generation to achieve this change, and possibly two or three. The five interactive learning possibilities listed below may be summed up as follows:

The ability to modify the subject matter will be given to the students. It's not necessary to know in advance the timing, pace, or even the whole contents. They will thus be allowed to choose

their own learning path, pace, and style with ample supplementary and motivating tutoring.Students may learn by exploring and experimenting in open environments while using the many options offered by multimedia course material. The benefits of self-directed and exploratory learning have been extensively studied in psychology and education.The same topic is presented in a variety of presentation styles for students to choose from. This material may be presented as text, data, photos, or audio. Students who have particular preferences for reading texts or who have unique capacity for auditory and visual learning may therefore all be catered to in accordance with their skills.

The course content utilized in multimedia education is well suited for modeling, simulating, and visualizing data. It's a highly worthwhile experience to play with this content. It makes chapter concepts easier to comprehend and explain.Interactivity also allows the learner to initiate a conversation with a device's application directly. 'Intelligent' describes this combination of hardware and software. Students get honest criticism and may correct their mistakes right away.As was covered in the previous two sections, the integration provided by new media, especially multimedia, primarily has an impact on students' perception and cognition. The following three effects may be replicated and given new names.The possibility of greater focus, more intense processing, and improved memory grows with the addition of additional data typessuch as visuals and speechto the traditional ones of text and numbers. The inclusion of audiovisual, verbal, iconic, and logico-mathematical means of communication has the same effects.When the aforementioned kinds and modes are combined in a didactically sound manner to enable students to cognitively integrate them, these possibilities may be increased even more.

The greatest fundamental change in education is likely made possible by this unification. Learning by association replaces linear learning at this point. Traditional memorization involves cramming a list of words, information, or concepts into the student's skull piecemeal. This is an example of linear learning. This is a very inefficient and terrible method of learning. With young individuals, it only has a small but noticeable impact. Our brain's greater portion is not used in this process. Learning via associations is a very distinct mental process. Actively tackling course content that can be broken up into smaller bits and then recombined has a considerably greater impact. With the aid of visual cognition, neuro-psychological research demonstrates that the right half of the brain is employed more and communicates with the left half of the brain more effectively when associative learning is involved. The popularity of hypertext and hypermedia has greatly aided learning by association. Students are no longer limited to the information found in a certain book or other source.

The Internet has a wealth of resources for associative learning if one knows precisely what they are searching for, which is a need that is regrettably not often satisfied[1][3].These possibilities are seldom ever used in educational institutions at the time of writing, even when a school has enough computers and modern media at its disposal. There is a lot of setup work that has to be done initially. It will be necessary to create new course materials and adapt them to the above-described didactical concepts. In addition, there will need to be extensive didactic and psychological study. Teachers will only be persuaded of the potential advantages of multimedia education and inspired to study and explore it if new course materials are high-quality and

teaching techniques are improved. Retraining on a large scale will be required. These are only the most critical requirements.

DISCUSSION

Approaches in CMC Research

The most heavily researched area of new media study in psychology and communication science, after human-computer interaction, is CMC. Many scholars were instantly interested in this area since CMC was thought to be an antisocial and/or an asocial entity. It was considered to be impoverished, impersonal, ineffective, and emotionally cold, according to Thurlow et al. The so-called deficit approaches to CMC were the most common during the initial phase of CMC research, which took place in the 1970s and 1980s. The accompanying theoriessocial presence theory, decreased social context cues theory, and information or media richness theoryhave previously been discussed. These ideas highlighted the CMC's inherent flaws in comparison to face-to-face communication, which was regarded as the standard and the highest level of communication.

The so-called social information approach sharply attacked the deficit approach in the 1990s. The social information processing model, relational perspective, and social identity theory were the ideas that were covered in 1 as well. They emphasized that users of CMC make up for any possible technological shortcomings in real-world, knowledge-rich social settings. They do this by using a lot of subjective creativity in human communication, expanding on all of the CMC signals that already exist and introducing new cues. The social information approach views CMC as everything but antisocial and asocial since it fosters social connections both online and offline and may be extremely personal, if not hyper-personal[4][6].Under the headings of the following five features, I wish to highlight some of the key findings of both CMC research methods.

Technology is a huge part of CMC. This is truer for CMC than it is for older forms of communication like telephone and surface mail. explained in great depth the vulnerability of networks. Evidently more susceptible than conventional surface mail and telephone are computer meetings, video conferencing, email, and videophony. The likelihood of a partial or even full technical breakdown of the discussion increases with the usage of computers, sophisticated switches, and visual media. A single faulty microphone, camera, incorrect communication protocol, or sluggish switching or processing unit might seriously impair the overall interaction process. Even though these errors don't happen often, they are always unexpected and challenging to fix.

A reduced ability for environmental adaptation is a second effect of technology strain on all mediated discussion. In conventional meetings, attendees have the ability to quickly improve conversational circumstances, such as by adjusting the conversation's pitch and by moving furniture, switching seats, shutting doors or windows, etc. The majority of criteria are set in electronic meetings. In various methods, participants are fastened to their equipment. The expectation of having to be available at any given place and time, brought on by new conversational media, is a third factor. Due to this, there is more pressure to interact on a regular basis in addition to the increased time constraint. The strain of contact at any time and location is increased by new media, despite the fact that they also provide ways to block or avoid online

conversation and wait for answers in asynchronous communication. The accessibility of these channels also raises expectations for how people will communicate with one another. For instance, in computer meetings, prompt and thoughtful responses are anticipated. The majority of the time, the participating parties and equipment fall short of these demands.Finally, we can draw attention to how little groups feel accountable for a communication process that is so heavily influenced by technology. In contrast to face-to-face communication, the technological medium has a greater share of the responsibility for initiating and sustaining the conversation.

1. Network vulnerability.
2. Payment for restrictions.
3. Communication partners are not need to be in the same place at the same time.
4. They are not required to converse simultaneously.
5. Conversation partners may be partly or entirely replaced by computers or other media.
6. Information processing devices may take the role of the mental processing needed for dialogue.

The last feature allows users to include other sources in the discourse. Users are no longer reliant on the firsthand expertise of their communication partners. Databanks and knowledge systems may be used to help teleconferences.The new media may widen communication channels than ever before when they use broadband transmission for the simultaneous sharing of pictures, sounds, text, and data.Each new medium puts its own restrictions on communication routes in comparison to face-to-face contact. We've seen that although certain forms of communication are accepted, some are not. The use of body language in particular and nonverbal communication in general is particularly constrained in CMC. Only video conferencing and videophony support this mode, although in a constrained and modified way. Kinetic communication is scarce in this situation. Long-standing experimental studies have shown that big visuals enhance the number of cues whereas tiny images, such as faces in videophony, provide less clues than voice telephony. On a screen, sign language reads differently since it is more accentuated and motions may come out as unfavorably forceful.

Due to these restrictions, it is difficult to establish trust and a strong rapport with discussion partners. Ideally, when CMC is employed, they are already in place. Email and teleconferences are not appropriate for establishing rapport or having difficult talks. They work best when the participants are acquainted and well-versed in one another. Email and computer meetings are ideal for creating ideas, asking questions, retaining existing relationships, and exchanging information, views, and orders. The most effective medium for interpersonal communication jobs requiring sophisticated communication, apart from face-to-face meetings, is video conferencing. High-quality video conferencing channels are still highly expensive and not very common, however. The majority of the time, only a small number of groups with a fixed size may participate, and not all participants are visible at once. Email, instant messaging, and audio meetings are more effective and less expensive options for the majority of business needs.

There are three methods to qualify the effects of these restrictions. First of all, it is amazing how effectively humans can make up for missing signals in visuals, sounds, language, and data by employing other clues. Most individuals may compensate for the loss of nonverbal and visual cues in a telephone discussion by subtly changing their communication style. Fielding and Hartley come to the conclusion that typical human communication is far more adaptable and strong than is often thought. It can withstand a significant quality reduction before regular communication patterns become dysfunctional. We are dealing with the sum of signals that individuals get from information, even if it is only partially complete.In CMC, similar results are shown. When compared to face-to-face communication, formal task performance, decision-quality, social or group impact, and social or personal attractiveness gained are often not inferior. The degree to which participants are familiar with one another and have previously utilized various mediums to communicate with one another, the sort of group and the task or activity in question, and the overall social and organizational environment are all contextual elements that have a significant impact on performance.

The second need is related to the first. Spears and Lea assert that while using computer-mediated communication, users take into account all of their social, cultural, and personal identities. They remark on the social presence and decreased social context cues methods. According to Mantovani, the social world is not only outside but also inside people, as part of their individuality, and functions even when they sit physically alone in front of their computer screens. Utilizing and amplifying available signals is how limitations are to be made up for. If this is the case, then there is a higher likelihood of stressing social identity than of reducing it in CMC.The fact that communication channel constraints are not always a disadvantage is a third crucial requirement. They provide the user greater discretion.

The telephone's limitations are one reason for its immense popularity. It allows users to converse in a more or less intimate manner without entirely disclosing their identities to the other party. Email and computer conferences allow for anonymous communication. These platforms allow for uninterrupted professional interaction free from social responsibilities or other distractions. Additionally, limiting input to one or two categories allows for focused brain processing. Participants in email and computer conferences may focus entirely on the text and the facts, and they can think about these topics for longer when communication happens asynchronously. In addition, skilled computer users often express themselves fully, while conference attendees prefer to keep a lot of things to themselves[7][9].

Societal Dynamics

Conversation through the new media is often less effective in coordinating communication than face-to-face interactions.

Order

Participants firstly contribute significantly more as they can all talk at once. Lack of nonverbal clues is a secondary factor. The technological mediation of the communication process leaves it very open to attack.When it comes to handling coordination issues, such as letting someone who is conveying something to you know you already have this knowledge, electronic communication might be ineffective. Terminals and electronic signals provide less non-verbal,

historical, and contextual clues. Electronic media struggle to convey the subtleties of meanings and frames of reference. Computer conferencing and email in particular have coordination issues, particularly when used asynchronously. Direct criticism is very lacking. These flaws are somewhat made up for in audio or video conferencing or a telephone chat. Very tiny cues are used to end the contribution and switch roles.

For each CMC media, coordination issues are unique, although they do have certain overarching effects. Building and maintaining group structure takes time. In CMC group sessions, natural leadership is formed much less readily. This is one of the factors contributing to the lengthier time required to achieve knowledge. Coordination and leadership must be artificially established in CMC. There are a lot more requirements for the leadership and technical setup of teleconferences than there are for in-person meetings. Additionally, many teleconferences are governed by programs because without them, different topics and streams of conversation tend to overlap.

For all of these reasons, CMC communication sessions are more structured than face-to-face encounters, with the exception of more private CMC media like email or billboards and more casual CMC media like electronic chatting. This was first noticed by Johansen et al. However, contributions made in online forums and groups are less constrained. This might result in increased self-exposure. However, irrational outbursts also happen often. Flaming is the term for this. The chat might prematurely come to an end due to an argument or a participant withdrawal.

Group polarization is another notable occurrence among CMC groups debating a given topic. When the group members have a feeling of collective identity, this happens. Individual tendencies toward one of the extreme group perspectives develop in CMC groups, but the need to frequently meet together predominates in face-to-face groups with a shared identity. 'The isolation, deindividuation, and physical distance characteristic of the Internet make them disregard the group's opinions and go their own way,' according to one study, when individuals engage in CMC discussion groups without identifying with the group, for instance in extensive Internet debates. General conclusions, from consensus to majority judgments, are difficult to get at in both situations, with or without group identification.

Decision-Making and Participation

Most social psychologists believed that prestige, position, and power had less of an impact on CMC than conventional communication up until the 1990s. The more constrained a communication channel, the more crucial the remaining clues become when background cues and nonverbal behavior indicators are lost. Given this, it comes as no surprise that in laboratory settings, participation in well-structured mediated group chats seems to be more equitable than in face-to-face dialogues. Extensive testing was used to support this viewpoint.It is commonly known that one individual or a small group of people often control face-to-face meetings with a specific goal in organizational situations. It showed revealed, however, that those who tend to remain silent made greater contributions to electronic group talks. Additionally, studies revealed that women were more open during meetings conducted electronically, especially those mediated by computers. An leveling of participation and impact in talks was the outcome of this elimination of conventional boundaries in electronic interaction.

Since there are no cues, distractions of all types are prevented, the concentrate on content is said to be the secret to its success.This widely held belief among psychologists in the 1970s and 1980s was confronted with a reality that was distinctly different outside of the laboratory in less structured large-scale Internet chats. Everyone could see that there was a lack of participation and equality among the infinite number of potential members addressed in discussion lists and electronic chat groups on the Internet, as well as a lack of central discussion moderation, which resulted in anarchy and the hard core's rule rather than democracy. The prevalent practice is that a relatively tiny core of individuals control the conversation, while the bulk merely sometimes participate or just read what others have to say.

The alleged equalizing benefits of electronic dialogue have been called into question by the use of Internet conversations and email, cooperation, and debate in actual organizational settings outside of the laboratory. Bikson et al. made an effort to demonstrate that CMC typically has the opposite effect of new patterns of hierarchy, status, and interaction in organizations, strengthening them instead. Rice even voiced the opinion that in actual organizational environments, CMC exacerbated rather than lessened status inequalities. Status barriers exist and are even reinforced, according to studies by Saunders et al. on the use of teleconferences in healthcare and by Scott and Easton on the equality of participation in group decision support systems. According to research by Smith et al., the great majority of emails sent inside the company they looked into were addressed to the same departments and levels of authority. When email had become a common medium inside of corporations 10 years later, Lux Wigand came to the same conclusion[10][12].

CONCLUSION

In conclusion, the social psychology program at CMC investigates the specific effects that online communication platforms have on interpersonal relationships, self-presentation, interpersonal dynamics, and the development of social identities. It provides insights into the intricacies of online social behavior and informs techniques for successful online communication, collaboration, and community management. The study of self-presentation, group dynamics, and social identities in CMC. The social psychology of CMC offers a useful paradigm for comprehending the psychological mechanisms underpinning online communication and its effects on people and society as CMC continues to change social interactions.

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CHANGES IN THE HUMAN PERSONALITY: THOUGHTS, EMOTIONS, AND BEHAVIORS

Sarath A Pradeep*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-sarath.pradeep@presidencyuniversity.in

ABSTRACT:

The human personality, composed of enduring patterns of thoughts, emotions, and behaviors, is subject to change throughout an individual's lifespan. This chapter explores the factors that contribute to changes in the human personality, examining the role of biological, environmental, and social influences in shaping personality development and transformation.Personality changes can occur in various domains, including traits, values, attitudes, and behaviors. One prominent factor contributing to personality change is biological maturation. As individuals progress through different life stages, such as adolescence, adulthood, and older age, biological changes in the brain and hormonal systems can influence personality characteristics. For example, the maturation of the prefrontal cortex during adolescence is associated with increased cognitive control and emotional regulation, potentially leading to changes in impulsive or risk-taking behaviors.

KEYWORDS: *Emotional Intelligence, Evolution, Maturation, Openness Experience, Personality Traits.*

INTRODUCTION

The lack of accessibility and usability of computer networking and the organizational norms and authority reinforced by the management of computer programming are cited as the key causes of these status barriers' persistence or growth. Spears even argued that the seeming independence of CMC hides the management's secret capacity to oppose employee autonomy and privacy.Mantovani comes to the conclusion that electronic democracy in companies is, for the most part, a fiction and that the real use of CMC is influenced by important social and organizational circumstances. He casts doubt on the reliability of the laboratory tests that Sproull, Kiesler, and others conducted, mostly on American pupils. The individualistic presumptions underlying their strategy are questioned by Spears and Lea. Spears and Lea contend that social power originates within the person as well. In electronic surroundings, individuals will not be freed from the control of groups and organizations. Power is a relational phenomenon that is absorbed in people's sense of self and sense of group. People will place greater value on the remaining status signals and the identities they bring to online talks when there aren't any present[1][3]

We may draw the conclusion that there is conflicting evidence for greater equality of participation and influence in electronic interactions. Real-world social and organizational circumstances, as well as the employment of specific discussion medium, seem to be deciding factors.Standards for conversation in new media have not yet been established. No socially sanctioned norms of behavior are relevant. Therefore, we must use extreme caution when extrapolating the results reported here. The limits of new media communication make it difficult to establish group structures with definite codes of conduct. Formal and casual, public and private communications coexist in computer meetings and email. Greetings and other courtesies are still not commonplace. It might be challenging to strike the ideal balance between efficiency and courtesy.

Prior to the mediated conversation, groups who did not share a strong understanding run the danger of adopting a style that seems combative and confrontational. Therefore, one should constantly consider if an online meeting is indeed the most efficient option. 'Although this behavior obstructs good decision-making, organizations may require interpersonal relationships, a distinction in status that aids in selecting between several targets, and a hierarchy to identify potential influence in order to be successful.This does not imply that there are no norms in interactions conducted via the internet. However, they are not universally understood and accepted, and they are almost always greatly influenced by particular settings.

Over time, communities create their own norms and vocabularies, such as the so-called netiquette regulating online conduct and smileys or emoticons, a kind of paralanguage that uses certain key combinations to represent emotions, such as. In electronic gatherings, the personalities and group identities might develop. When individuals feel closer to the persons on the other side of the screen than they often do in meetings, CMC may even become hyperpersonal. it may become more personal, intimate, and friendly than face-to-face communication. In online spaces, disputes about identities do occur sometimes. Online impression management includes this.New media are often utilized in organizations for less official communication. They seem to act as an emotional safety valve. Contrarily, in these situations, it is the medium's alleged imperson- alitya phenomena we are already acquainted with through sex lines, computerized personal ads, and the likethat facilitates intimate connection. I attempt to address this seeming conflict in the following.

DISCUSSION

Many writers believe that over time, exposure to computers and other media will alter human mentality. They might be correct. Despite the fact that some empirical evidence backs them up, their predictions remain highly theoretical. The first instances are from Sherry Turkle's interviews with 400 computer users, of whom 50% were adults and 50% were youngsters. Her book The Second Self: Computers and the Human Spirit utilizes the findings. current social-psychological studies provide more current instances. Such study demonstrates, for instance, how individuals with certain personality traits are drawn to mediated communication. Finally, we might include mass communication studies, which has long been interested in determining how media affects the human spirit.The global use of names generated from the human intellect and human communication by ICT serves as the primary beginning point in this. This anthropomorphizing of technology raises the possibility of technological impacts on people's

personalities. It is commonly known that individuals often treat computers more like lovers than like tools. Since individuals regard media like actual people and locations, Reeves and Nass have published a significant number of experimental instances demonstrating the media equation that media experience equals real life. People see communication with a computer as a conversation and complete human communication with and via other media when it is technically mediated. This anthropomorphization of technology and media is quite comprehensible. There are at least three fundamental causes to consider:

Technology's Anthropomorphic Transformation

The involved technologies lack transparency. Computers resemble sealed, unlit black boxes. For the most part, large-scale networks are opaque. Even if one were to understand these technological complexes' internal workings, one would still not be able to determine how they operate since computers and other modern media are reprogrammable and multipurpose. As a result, it is impossible to draw conclusions about these new technologies by making comparisons to the past.These technologies seem to be self-contained entities that can reply to questions and orders. The propensity to refer to technologyand even to technologyusing words that originated in human communication is growing.These technologies react as software or hardware with intelligence. They function as logical units that communicate through language. They engage in human interaction and work with languages. It is hardly surprising that people believe they are interacting with brain-like entities. Once voice recognition, spoken output, and biometrics become widely used in computer technology, this image will be severely reinforced.

Humanizing Interactions With Computers

Language Changes

The interaction between people and computers or other new media gets humanized as a consequence. There are three recurring occurrences that are seen:A tailored connection exists. Computers are handled by people just like other people. It seems as if you are speaking with a human services provider when you consult assistance resources or information services. People automatically make up for the limitations and impersonality of communication occurring during an internet chat.Humans get entangled, fascinated, or even addicted to the connection since they have far more power over it than they have over interactions with other people. Numerous psychological demands may be satisfied. It is a well-known phenomenon that people have compulsive and sometimes even obsessive interactions with computers and current mass media.

Humans and media/computers form a cooperation. People see computers as companions who help them with various psychological and social requirements. A computer is an effective projective medium because it functions as a second self and allows people to project various identities onto it. They may then converse in this secure setting they have established for themselves. The well-known social role of computers and other media, like radio and TV, of replacing company, is a related characteristic of these devices.Humans unwittingly surrender to technology by humanizing their interactions with ICTs. This is particularly clear in language. We're talking about changes in normal language as well as the growing usage of technical jargon. The number of words used declines, sentence structure becomes more rigid, the use of abbreviations, stopgaps, and incomplete sentences rises, and emotional expressions become less

complex and varied in human-computer interaction, email, and computer conference conversations. Other instances may be found in word processing, which from the very beginning seemed to fragment messages[4][6].

The effects are particularly acute when attempting to establish social connections. Technology gives users great control over how they make contact and take turns throughout subsequent dialogue. More than ever, these procedures can be planned. The number of chance encounters in and via the media of the network society will probably decline as a result. Unexpected programs and content can still be found when browsing the Internet and clicking or responding to hyperlinks and addresses, just as they did when people used to use the old media of allocution and consultation because of their overwhelming supply. One is not compelled to pay attention, however. There is an excessive supply and zero social pressure to get individuals to pay attention. Personal information agents will thus be used in the future to prohibit unexpected and unselected material and tactics. Social interactions will most certainly become more pragmatist, businesslike, and reasoned as a consequence. A decline in conventional social skills, such as the ability to react adaptably to accidental encounters in the public arena, might be another result.

Online dating's rapid growth in popularity is a comparable phenomena. This is an excellent illustration of how online social interaction may be more selective and in your control. Here, the fanciful romantic ideal of discovering the only one by accident is swapped out for a more pragmatic search for suitable companions who share certain traits. Naturally, chance encounters also happen in online dating since there are many more prospective partners than in the offline world, but the online dating program rapidly cuts down this number to reasonable levels. It seems that internet dating is more desirable than conventional dating since the couples have comparable traits, attitudes, and views. Finding someone appealing is made simpler by online dating, which also encourages people to be more forthcoming and pay attention to their relationships. However, it is equally simple to end one online connection and start another one right away or concurrently. Long-term love and sexual relationships may suffer as a result of this. The old wooing and flirting techniques may eventually become obsolete and be replaced by internet impression management techniques.

According to John Naisbitt, as technology advances, human demands and possibilities for social interaction will grow. He referred to it as high tech, high touch. The issue is that communication technology may operate as a mediator as well as a replacement for social interaction. According to reports, this technology reduces loneliness. In a society when choosing to connect through media with another person is always an option, how can loneliness exist? One must understand that in the network individualization that characterizes the network society, the initiative in forming relationships is increasingly put on the individual in order to respond to such a significant inquiry. The person will have to agree to ongoing contact. Some will be successful, while others won't. Perhaps this explains the startling finding that, despite the abundance of media available to contemporary civilization, loneliness is on the rise in modern western society, as shown by various sociological surveys. Mediated contact with friends, family, and strangers is often not a sufficient replacement since for some, it causes a gnawing sense of distance and communicative asynchronicity. Others may find it to be quite intimate and personal. Despite the benefits of maintaining personal relationships across great distances through the internet, many

contemporary individuals still yearn for intimate face-to-face interactions in tight-knit groups and dense social networks.

In the long run, the effects of technology on human language and communication might affect people's personalities. The increased opportunities for contact and knowledge will, at best, help people build personalities that are shared by everybody. The four linked personality types that are outlined below might result from these alterations in the worst-case scenario.The stiff or formalistic personality might be described as the first kind. People who often use computers or other media, and are thus exposed to the language and social norms changes discussed above, may begin to place the same expectations on interpersonal communication as they do on technically mediated communication. For instance, they can find human language that is hazy, unclear, and incomplete irritating. With the exception of locations that are specifically created for this form of communication, such as online chatting and instant messaging, they could grow frustrated by chatter and conversation that has a clear purpose or aim. Finally, people could only be content with the prompt and precise responses they are used to getting from their computers or information services. These folks may want to have the same level of control over interpersonal communications as they have over their interactions with technology and media. The inflexible personality will retreat and go back to the secure surroundings of his or her second self if the other person does not want to comply with the demands made:

The universe of safe things, however, is severely constrained if one's sense of self is defined in terms of the things over which they have absolute control since they often aren't persons but rather other objects. Having mastery may change and stop being a driving factor for personal growth. It turns into a means of disguising worries about oneself and the intricacies of the outside world. People can become stuck. One may refer to a second kind as the computerized personality, which is often paired with the first. Some individuals may start thinking of the human brain as a collection of parallel linked processors and the personality as preprogrammed and reprogrammable software when the widespread analogy between the human brain and the computer is taken too literally. Sherry Turkle discovered a number of indicators pointing in this direction while doing study among the first generation of computer users. The contrasts and similarities between users' personalities and computers were used to characterize them.

The unsocial personality type might be considered a third. Direct human companionship may be replaced safely by computers and other media. This is especially true for anybody who, for whatever reason, fears intimacy or who prefers to exert greater control over it.We often suffer sensations of emptiness, of detachment, and of the unreality of ourselves because we are terrified of being alone yet fearful of closeness. A balance is offered here by the computer, a buddy without emotional needs. You might be a loner yet you're never alone yourself. You may talk to others, but you'll never feel exposed. Turkle also saw computer hackers, especially men, run away from face-to-face interaction with people. The more quiet, introverted individuals have shown to do quite well in email and at internet conferences. One can only speculate about the personality types of those who use webcams to engage in sensual conversations or phone sex lines. In any case, there are many options for 'intimate strangers' thanks to the new media.

The multiple personality is the last speculative kind we'll discuss. We may assume many different identities by using pseudonyms on the Internet and in a variety of computer games.

These possibilities serve as the foundation for a game or simulation like a multi-user dungeon or realm. Today's society often engages in the serious game of identities. For the first time in history, individuals are not just given a predetermined personality here. instead, they are required to mold their own identities to some extent. According to Coolen, the employment of several identities online serves as a mirror to our perceptions. A contemporary perspective of people and the world is reflected in this mirror. Since contemporary identities are not predetermined in advance, this reality is not only a counterfeit. As different aspects of our identities are exposed in different social circumstances, contemporary personalities grow increasingly complex. MUDs and other online role-playing games, in Sherry Turkle's opinion, provide us the opportunity to explore our identities as much as we desire and discover the answer to the question, Who am I? Teenagers in particular could benefit from this. The fact that this play does not really assist us in real life is a drawback for the development of further identities. Existential ambiguity is already brought on by a person's repetitive quest for their true many selves.

These online games and productions have a problem since there is no barrier offered by reality. It provides secure surroundings. Users are not reprimanded and are free to use a different identity whenever they desire[7][9].People may become some form of cyborgs when these personality types continue to evolve together with the technological capabilities of ICT and biotechnology. This phrase connects the human body with cybernetics.As a consequence of this interaction, a system of technological and human elements gradually regulates its surroundings and creates a new whole. Gradually, this technology is moving from the realm of science fiction to mainstream culture thanks to movies like Blade Runner and Robocop. Cyborgs are both technologically advanced humans and people who have been combined with technology. It is a truth that individuals are increasingly using prosthetic limbs and other technological equipment, taking them wherever they go and even putting them inside their bodies.

The possible repercussions of humanizing technology and of technology taking over an increasing number of human duties have been discussed on the preceding pages. ICT must have a bigger impact on people than any other tool. After all, it is a piece of 'intelligent' technology that is directly influencing how people think. As a result, ICT tools are becoming closer and closer to the human brain. ICT equipment will soon be present not just in front of us but also on, within, and even outside of our bodies. Consider the potential mental effects of people carrying about a tiny, very powerful multimedia computer in the style of a head implant for 24 hours a day in 50 years. Each picture or piece of information needed would actually be displayed in front of their eyes, or maybe even directly on the retina via an implant chip, with only a simple spoken command processed by speech recognition.

This very intimate computer would progressively become a part of our first self, infiltrating our deepest and most private personalities, serving as both a second self and an extension of it. When that day comes, it will be crucial for us to understand who we are as people, how we differ from other devices like computers, and most importantly, what we want to become. Otherwise, one of our greatest strengthsthe capacity to swiftly adapt to our surroundingswill be sacrificed to a technology we now seem unnatural.The basic findings of this work are presented in this final. What purpose does the idea of a network society serve? Does it take precedence over other social groups? What does it imply that modern industrialized civilizations are dominated by networks

in every aspect? Are networks now their fundamental units? When networks create such fundamental structures, can humans alter them or should they be taken into consideration?

The second argument is that they are not universal principles since it examines the more or less deliberate design of the information and network societies in the most significant regions of the globe. We examine a variety of models for looking at the information society. Many similarities will be apparent, but we will also observe that as ICT becomes more integrated into these communities, the distinctions between various regions of the globe are becoming more pronounced.This book's conclusion covers a variety of broad policy perspectives related to the analyses it contains. We'll talk about seven key strategic aspects of network introduction: access, security, design, control, legality, returns, and content. The stated societal ideals of freedom, democracy, and material or spiritual prosperity will serve as the backdrop for this.

Network society was described in sections 1 and 2 as a kind of society that organizes its interactions increasingly via media networks, which are gradually replacing or enhancing the social networks of face-to-face communication. This indicates that the main organizational framework and the most significant societal structures are being shaped by social and media networks. Contrary to what Manuel Castells exaggerates, they are not the whole fabric of society. Individuals, partnerships, groups, and organizations continue to make up society. They do, of course, create external and internal interactions, but these ties do not create a society that is equal. It is impossible to remove society's biological and material components, including all of its laws and resources, in order to reduce it to a core set of interdependent interactions. Even a completely mediatized societyone in which social and media networks are equalwhere all relationships are fully realized by and supported by media networkswould still be dependent on bodies, thoughts, laws, and resources of all types.

This book's initial conclusion is that contemporary society is transitioning from an information society to a network society, which is a similar idea. A transformation from a mass to a network society is taking place. We were able to pinpoint a network structure in the economy, politics, and society at large in the years before. The metaphor of society's nervous system was thought to be relevant since a network structure not only permeates various domains but also links them in an expanding number of ways. Global economic networks, for instance, challenge the national state's dominant position in the political order. A brand-new market in electronic commerce is virtual communities. Social exclusion is made worse by the economy's use of global technological networks that are selective.

The micro, meso, and macro levels of societyalso known as the private and public spheresare all connected by a network structure. The boundaries between these concepts were seen to be eroding in reality. Interpersonal, organizational, and mass communication all coexist on the internet. We use this medium to bring the 'whole world' into our residences and places of business. However, the utilised public computer networks are also violating our privacy here. On the other hand, options for individual choice unheard of in history may strengthen the personal sovereignty of network users. Traditional lines of demarcation do not vanish as a consequence of their fuzziness. Instead, as has been noted in various s, it entails both greater integration and more difference. This is a result of society's increasing complexity.

The dual nature of the network structure is the second of our key findings. All applications of new media in the fields of the economy, politics, culture, and personal experience are marked by a mix of scale expansion and scale reduction. The main selling point and appeal of various mediums is this mix. It explains why they were quickly adopted during what was seen as a communications revolution. Centralization and decentralization, central planning and local autonomy, unity and fragmentation, and socialization and individualization are only a few of the oppositions that a dual system produces. It is not an easy declaration for an indecisive author to argue that these opposites constitute a totality and can be seen in both the causes and the impacts of modern media consumption. It is a fundamental aspect of network structure. Networks may link and detach at any time. They are connected via centers, nodes, and relations. At these moments, people engage and make decisions in diverse ways and are either central or marginalized, included or excluded[10][12].

CONCLUSION

In conclusion, Human personalities evolve throughout the course of their lifetimes and are not constant. These changes are a result of biological development, environmental influences, social interactions, and deliberate activities. Strategies for self-improvement, intervention, and support may be informed by an understanding of the variables that influence personality development and change. Accepting the possibility of personality change enables people to adapt, develop, and evolve throughout the course of their life. It is important to comprehend the dynamics of personality change in a variety of situations, such as those involving personal growth, education, treatment, and organizational settings. Understanding the possibility of personality change challenges, the idea that personality is a permanent trait and provides encouragement for personal development and self-improvement. Encouraging healthy personality development and resolving maladaptive personality characteristics or disorders may both be accomplished by recognizing the possibility of personality change.

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MEDIA NETWORKS AS NEW SOCIAL ENVIRONMENTS

Rajesh Sisodia*

*Professor, Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-rajesh.sisodia@presidencyuniversity.in

ABSTRACT:

The emergence of media networks, facilitated by advancements in technology and the proliferation of digital platforms, has transformed the social landscape, creating new social environments for individuals to interact and engage with one another. This chapter explores the concept of media networks as new social environments, examining the characteristics, implications, and challenges associated with the integration of media networks into the fabric of modern society.Media networks encompass a wide range of digital platforms and technologies that facilitate communication, information sharing, and social interaction. Social media platforms, online communities, and digital communication tools have become integral parts of people's lives, offering new avenues for connection, self-expression, and engagement. These media networks provide individuals with opportunities to interact with others globally, regardless of geographical boundaries, fostering connections and relationships based on shared interests, values, or experiences.

KEYWORDS: *Connectivity, Digital Communities, Online Socialization, Online Identity, Participation, Social Capital.*

INTRODUCTION

A third key conclusion is produced by the network's dual structure of usage. It is not appropriate to elevate this structure to the level of an independent life. Structure, activity, and awareness or mental states are all interconnected in a dialectical way that is described, for instance, in the structuration theory. The actions of communication show structures. This still allows for free will and awareness. Although dual structures are defining and enabling, they are not a natural need. They provide options within certain parameters. This is the reason why the duality of centralization and decentralization, central control and local autonomy, allows for both greater and less freedom when utilizing networks as well as more and less choice in a wide range of situations. Because of this, it is said that neither gloomy nor optimistic viewpoints are offered in this work. They may come across as gloomy, emphasizing the negative aspects of the relevant technology, given the extreme excitement that accompanied the hype around the Internet and other new media in the 1990s. However, they are more upbeat than the voices of dismay that emerged following the crash of Internet shares on the capital markets in 2001, arguing that the new economy and the Internet's golden era have yet to arrive. In actuality, a fair viewpoint is required. Because they are utilized by ever-increasing s of the population and by those with vested interests in the economics, politics, and culture, new media, like the Internet, are

progressively coming to be seen as normal media in the first decade of the twenty-first century. After the public's perception of the Internet has changed and been integrated with other new media, I expect that a balanced viewpoint will be more readily accepted[1][3].

There is also another justification for paying close attention to persons with entrenched interests. Despite the emphasis on duality, it must be acknowledged that there is some bias in the applications and outcomes of ICT. The leaders of corporations and governments are the primary players in inventing and implementing this costly and complex technology. They serve as the commissioners, investors, and decision-makers. It is to be anticipated that they would use it to restrict personal liberty and free choices at the bottom of the organization that do not serve their interests as well as to reinforce central control, although in flexible forms. When a new medium with radical potential is assimilated into society with its entrenched interests, it wouldn't be the first time in history that it begins to resemble normality. It has been mentioned numerous times in this book that ICT is preferable than outdated technologies for sophisticated and intelligent kinds of central control. Whether ICT's potential to disseminate decision-making will be used depends on social and organizational struggles.

Social and media networks work together to reinforce how prevalent network structures are in contemporary society. Media networks are becoming into social environments, not only channels or means of communication. They serve as social settings by connecting the various settings or surroundings of the many actors functioning at their nodes and terminals. Although media have unique qualitiesreferred to in this book as communication capacitieswe cannot fully comprehend how they function in real-world situations without learning about the social environment in which they are used and the people who use them. This contextual approach explains why this book pays particular emphasis to how mediated and face-to-face communication are related. The main finding is that social networks and face-to-face contact are enhanced by media networks and mediated communication, not replaced by it. They become intertwined, and if their strong points are used, both will gain.

Another result of the examination of network use's focus on context, environment, or embeddedness. It is not assumed that widely held beliefs about how irrelevant basic concepts like time and location are in new media networks. On the other hand, it is envisaged that its users' physical, biological, mental, and material situations would continue to have a causal influence. As the new media provide improved opportunities to pick and directly face the many situations, demands, and views of its users, their significance will only increase. The connection between organic, or physical, and virtual reality will ideally be to both of their advantages.The entire impact of new media on contemporary society is the subject of a final judgment. Will they have a revolutionary impact on society, or will society just gradually change as a result of them, or will they have no real impact at all? Or, to put it another way, will the network society be a whole distinct social structure? This book provides the answers to these issues, demonstrating that changes will be evolutionary rather than revolutionary and that the network society won't be a completely new social structure. This does not exclude the possibility that present developments are occurring more quickly than before. I stated that the network society is a sort of egalitarian society in paragraph 7. Goods, ideas, monetary values, illnesses, and all types of

crises are disseminated and transferred more quickly than ever via social, economic, and media networks.

These responses don't argue against the notion of the communications revolution stated in sentences one and three. At the level of media growth itself, this is a revolution. It doesn't consider the dramatic changes that media has brought about in society. The first communications revolution, as portrayed by Beniger at the turn of the 19th and 20th centuries, was really a result of another upheaval, the industrial revolution. The new media often accelerate tendencies that have already emerged and strengthen social interactions in contemporary society, as we have repeatedly seen in this book. The new media amplifies trends. This is quite similar to the image Brian Winston painted in Media Technology and Society. In a thorough analysis of media history from the telegraph to the Internet, he argues that the so-called law of the sup-pression of radical potential is the most significant contribution of contemporary media. Although new media technologies first seem to have revolutionary potential, they eventually adapt to already-established social structures. Winston argues that we shouldn't ignore the fact that these procedures may both help and hinder the adoption of new technology. Testing this 'rule' in the growth of the Internet from its revolutionary promise in the 1990s to its 'normalization' in the first decade of the twenty-first century would be intriguing[4][6].

Although the potential social effects of new media are spectacular and wide-ranging, as explained in this book, they will not alter the foundation of existing industrialized societies, much fewer emerging nations. As ICT does not match conventional bureaucratic authority and planning, it is possible that it had a role in the fall of the Soviet Union and other communist nations. But capitalism will continue to exist. It is likely to be strengthened or revitalized by the new media in a more potent, adaptable, and harsher social form. Even if patriarchy may be in trouble in many areas of the globe, it will take a very long time for it to disappear, and modern media will likely play little to no role in that process. The new media will not stop ecological catastrophe either. The economy will become less materialistic and more successful at conserving natural resources as a result of these media, at most. ICT does not create economic globalization. rather, it accelerates it. It should be noted that while the national state and sovereignty are threatened by new media, they will not vanish. Additionally, it's possible for politics to become concentrated in a party-based, infocratic, or surveillance state. ICT is not the source of growing social and informational inequality, but it may make them worse if just a small portion of the population takes use of its potential. We could go on like this. It seems more prudent to keep on and discuss the many ways contemporary cultures have attempted to adapt the development of this new technology to their current laws.

DISCUSSION

The Information and Network Society in North America,Europe, East Asia and The Third WorldIs the information and network society a deliberate product of policy? This seems to only be somewhat true. This book's descriptions of this sort of society's traits tend to be somewhat ethereal. They move in a sneaky manner and are not easily seen. They alter the fundamental components and elements of society. Therefore, it is unlikely that policy officials of all stripes will be able to create the visions necessary to have an impact on the information or network

society. However, the information and network society that we can now see is really being created by the more or less conscious and independent acts of these types of policy makers.

On the other hand, compared to earlier social stratifications, the information and network society is more conducive to conscious policy. At least in part, gathering information is a deliberate action that influences other conscious behaviors, including establishing educational policy. Infrastructures like networks may be constructed, much as roads. Therefore, the information and network society might theoretically be planned out before it was implemented. For the construction of the information society, the information superhighway, the global information infrastructure, or whatever they are called, such plans are really developed in a variety of policy perspectives or models.

Several parallels have emerged in the several designs that have been put out globally during the last 20 years. Additionally, a variety of divergent designs for the information society have arisen, characterizing policies in various regions of the globe. By comparing the information and network society policies in North America, Europe, East Asia, and the Third World, I first highlight the commonalities before looking at the differences. For the latter, I really follow Shalini Venturelli's categorization of information society models from a comparable worldwide comparison.The historical choice taken throughout the majority of the globe to allow market forces to take the lead and build the nervous system of our future civilizations is the most significant commonality for its genuine and permanent influence. Governments now play the role of catalyst and defender of social and legal circumstances in this period of liberalism and privatization. Business enterprise has largely been placed in charge of creating the framework, supplying the material, and defining all the prospects and repercussions of the information and network society.

This holds true for every nation's policy, from the United nations, where corporate interests completely dominate, to Europe, where public-private partnerships are a little more robust, to East Asia, where the developing nations are given a lot of encouragement[5][7]The degree of economic investment by governments themselves is low in this era of reduced public spending. They often lack even a strategy or vision for the form and makeup of a unified information infrastructure. Business companies thus build this infrastructure in accordance with their own expectations and objectives. The governments may rectify things later by imposing interdependence, competitiveness, and shared standards.The fact that national policy objectives and action plans are ultimately economic ventures is a second commonality. The main goal is to strengthen countries' standing on future global marketplaces. It is obvious that this is a component of the economic competition between Western Europe, North America, and East Asia. This implies that social considerations are always secondary or nonexistent to economic considerations.

The fact that most viewpoints are technological determinist and that the relevant economics are supply-side oriented is a related area of agreement. Instead of the content and services that new media are meant to supply, infrastructure is the main emphasis. The information society and the rapid spread of ICT are seen to be inevitable. The chances are just too appealing for business and household customers to pass up. They just need to use the new media. These hopes have been supported by a succession of hypes, starting with the Internet in general, moving on to e-

commerce, and concluding with broadband and cellular communications.After 1993, it is obvious that all policy stances established by national governments, international organizations, and conferences are a matter of promotion. Nothing notable occurred during the start of the 1990s about the technology in question, which had been evolving for decades. In actuality, the great majority of Americans, Europeans, and other people at that time had no idea what the Internet or other new media were. In order to launch the so-called information superhighway or national information infrastructure, it was necessary to make businesses and residents aware of what was to come. To support the development, regulation, and marketing of this new infrastructure, almost every industrialized nation in the globe approved an action plan.

Grand visions of the future's immeasurable potential advantages for the society and economy in question were proposed in the 1990s. Instead of focusing on the hazards, we highlighted the potential. Economic development, more employment, improved education, a greater standard of living, environmental preservation due to energy and travel cost savings, and a boost to more direct forms of democracy are all benefits of the information revolution. It took bravery and legislative protection of universal access, safety, privacy, and intellectual property rights to approach the threats.Propaganda and exaggerated hopes progressively gave way to a more realistic understanding of the information society by the end of the 1990s. In these years, new media gradually permeated social and economic life, leading to genuine issues that required answers that were contrary to initial assumptions. This tendency grew after the turn of the century and the bust of the Internet euphoria. Eventually, long-standing inequalities across nations' economic, social, and political systems and cultures came to the fore once again.

The most glaring example of the aforementioned commonalities may be seen in the United States. It serves as the model nation for creating information highway strategies, products, and services. It will presumably be the first fully developed information and network civilization. The nation continues to dominate the Internet with the highest percentage of hosts and connections in 2005. It is the primary ICT hub on the international market. In terms of software, services, and, to a lesser degree, hardware, it dominates the market.It thus comes as no surprise that the United States is where private initiative and economic interest are most prominent in relation to new media. The libertarian model, the liberal market model, and the public interest model are three very distinct, contending models or socio-political frameworks of the American information society, according to Venturelli.

The inventors and early users of the Internet have been heavily influenced by the US libertarian heritage from the beginning. The idea of minimum governmental interference and a maximum of initiative and regulation by individuals, customers, and enterprises utilizing ICT themselves serves as its starting point. According to this perspective, a society's information networks should be open and non-proprietary, with strict limitations placed upon state intervention. It opposes the monopolization, regulation, or control of the information society from a distance. Conflicts should be settled by self-regulatory consensus or agreement among network users. The tradition's origins may be traced to the traditional American mindset of the endless New Frontier and the ongoing conquest of new spaces, in this case cyberspace.The libertarian model continues to be fought for by many Internet business advocates, academics, and electronic pressure groups in the United States for open architectures and open source software, for the preservation of fair use

rights for intellectual property, and for new business models in the Internet economy even though the early days of the Internet have passed.

The US liberal market model has a far greater impact and really dominates American information and network society policies. All major corporate interests and their allies in the US government support this. They call for a minimal amount of government interference while also demanding a powerful legal regime guaranteeing contractual and proprietary rights in the market place. In this regard, the libertarian paradigm, which supports open sources and fair use rights, contrasts with the liberal market model. The libertarians advocate self-regulation, while there is a focus on legal and market business regulation.Therefore, the law should defend contracts and property rights under the liberal market economy. However, broad legislation to safeguard privacy and the rights of consumers are rejected, while anti-trust law is reluctantly adopted. These are so weak in the United States because of this. Yao claims that the dominant US viewpoint is to allow the market time to work out these kinds of issues on its own and to produce self-corrections. Long-term customers would benefit from cheaper, better, and safer goods as a result of this.

The public interest tradition in the US seeks to strike a balance between business and consumer interests. The communication sector's markets are not perfect, but they can be made better by regulation that addresses, to name a few of the most significant, petition law, fair trade, consumer protection, universal access, educational investment, government investment in innovation, protection of privacy and of minors, network interconnection, and maintenance of fair use rights.A small group of individuals, including consumer advocacy groups, civil rights organizations, trade unions, employees of the public media, many academics, and those who are referred to as liberals in the United States, embrace the public interest model. In the last 20 years, this model has lost popularity. The regulation mentioned above has generally failed to pass. The requirements for universal access in telecommunications are essentially the sole accomplishment. These have provided funding for several computer access sites in public institutions such as libraries, hospitals, community centers, and schools.

The liberal market model has won the struggle between these approaches hands down. As a result, the US economy is the most competitive in the world when it comes to information and communications. Due to the fact that many Americans lack access to the necessary information infrastructure and digital skills, this has occurred at the price of several public interests and the foundation for future innovation. Public law has been overlooked in favor of private law and contract law.In the US market, ICT's economic freedom is not matched by its users' equivalent political, economic, or cultural liberties. However, the US record of limiting this freedom in the name of national security and the fight against crime and terrorism is impressive: the Patriot Act, the Communications Decency Act, the discouragement or outright prohibition of encryption, the proposals for key escrow, a clipper chip, and a violence chip.

People arguing for civil and civic rights often lose their legal battles with corporate interests and government security. This is mostly a result of legal flaws. one must either make an appeal to one of the many particular legislation or to the very generic constitution. The parties with the greatest attorneys or well-organized interest and pressure organizations gain from a piecemeal law that is full of loopholes.

Canada, the other North American state, has created greater protections against the impacts of corporate domination than the United States, for example in public information supply and privacy regulations. The public interest approach is significantly more robust in Canada. Canada further demonstrates the patterns that are prevalent in Europe in this manner.In Europe, we must distinguish between the 15-nation EU that spans the north, west, and south of the continent, the 10 Eastern European nations that joined the EU in 2004, and the remaining countries that were formerly part of the Soviet Union. The EU places the greatest importance on the growth of the information society. The EU runs the danger of losing the war of rivalry with North America and East Asia on the international information market. Except for telecommunications equipment, it falls behind in the development of software and audiovisual products. Due to its apparently great cultural past, it only has a leading position in the provision of local services and so-called multimedia content.

The European propensity toward governmental action to develop and control the information society is the major distinction between the two continents. The 1990s saw a significant drop in this trend. Venturelli contends that three main intervention modelsthe EU liberal market model, the EU public service model, and the EU national-cultural modelremain in competition for dominance in EU policy, at least.In Europe's information and communication industry in the 1990s, liberalization and privatization had a significant impact. The liberal market paradigm that encouraged these developments, however, differs significantly from the liberal market model in the US. Neo-liberal economics in Europe embraces and even anticipates government engagement in this industry via both public legislation and economic stimulus. The primary mission and legal basis for achieving this has been the endeavour to unify Europe. Every policy in the EU is subordinate to the goal of establishing a single market among its members. Projects related to the information society provide great chances for the European Commission, the Council of Ministers, and the central directorates to give Europe a new purpose, to improve Europe's standing on the global stage, and to validate their own positions as the EU's coordinating authorities.

The public service model is the main European approach to the information society that is opposed to the liberal market approach. This paradigm is based on the heritage of welfare states in European nations. According to this concept, the government is required to provide people' overall wellbeing and access to the services they need to participate in the information society. Strong competition laws, standards for the quality of networks and their services, universal access to telecommunications, high standards for privacy protection, recognition of authors' rights and fair use rights, and public investment in research and innovation, employment, education, and health are all required. It is important to distinguish between the US public interest model and the EU public service model. By distributing public services, the European model seeks to protect people' constitutional rights in an information society. In the American system, the sole function of the government is to safeguard the legal rights of consumers and small producers against the unchecked power of large corporations.

A third paradigm, the EU national-cultural model, complicates European policy. This information society model places an emphasis on the material that will be shared and transferred through networks. this content should protect, support, and enhance the many national cultures

inside the EU. The paradigm emphasizes that rather than economic or political unifications, national groups are expressive. As a result, in terms of audiovisual policy, content control, and new media program development, the national media are shielded from the risks of the global, um, 'American' market.Since the 1990s, there has been an ongoing attempt to create the information society as a result of the conflict between the EU's free market, public service, and national cultural models. It is not surprising that the EU's policies on the information society alternate between larger societal issues like social inclusion for all, national considerations, and a more technological and market-driven emphasis.

The information society has primarily been an economic endeavor for the EU as a whole, according to the preliminary results of this competition, which show that the liberal market model has gained the upper hand. The EU invests several billion euros yearly on programs related to the information society. A stronger economic position, which is urgently required from a European viewpoint, is created through adapting and harmonizing the laws of the member states. The southern and eastern regions of the EU obviously lag behind North America in terms of the number of individuals and businesses having access to computers and networks. Europe falls behind in the race for innovation against the United States and East Asia. The so-called Lisbon 2000 agenda, which aimed to make Portugal the most inventive and competitive economy in the world in 10 years, has failed miserably.

The EU's information society strategy has a stronger civil rights focus than that of the US and, much more obviously, East Asia, which is a success of the European public service model. For the rest of the world, the EU's extensive privacy regulation serves as a model. It has put very few limits on the freedom of information and communication, and it supports encryption and the right to communicative anonymously online. However, in terms of intellectual property rights, it has taken a stance that is similar to that of the United States, which is bad for the public interests of users, libraries, and educational institutions and good for the copyright business. The EU has been able to highlight interconnectivity and open standards as well as combat emerging monopolistic tendencies on the private sector thanks to a bigger role for national and European governments. As an example, the European Union (EU) and not the United States compelled the American corporation Microsoft to provide an Internet Explorer version without a media player in 2004.

Even when compared to southern Europe, Eastern Europe falls behind the EU in the adoption and development of ICT. Eastern European nations continue to maintain sizable governmental bureaucracies. They have embraced a wild kind of capitalism that is no longer existent in the EU in order to promote the development of new media. Transnational media and telephone corporations have stepped in to fill the vacuum and provide commercial broadcasting and mobile telephony since the governments in these nations lack the resources to invest in new technology. The first findings, especially in Russia, have shown that the affected people' access to information outlets has diminished rather than risen. Increased inequality overall is the culprit. In the media, previous state provisions have been eliminated. Despite being restricted and of pretty poor quality, they at least offered information for everyone. The distance between large cities and the countryside has been expanding since the 1990s, and the distribution of computers and network connections is now very unequal.

After the United States, East Asia is the second-largest player in the global information technology market. In terms of manufacturing hardware, it excels. It is substantially weaker in software and information services. The most notable feature of East Asia in terms of the information and network society is the state's significant participation, which Castells refers to as a developing state. The influential MITI ministry in Japan launched the Teletopia and Technopolis programs, which aim to establish 63 digital cities and attempt to replicate Silicon Valley in other places. In Singapore, the government extensively funded Singapore One, a nationwide high-speed multimedia network, while in South Korea, the same was done with the Korea21 Project. In Malaysia, the government paid for the launch of the Multimedia Super Corridor Project.

The East Asian developmental state is not a communist organization for planning. This kind of state embraces the principles of global capitalism and only seeks to alter the economic system in the best interests of the country, ignoring or suppressing any other interests such as the freedoms of information and speech in civil society. To encourage and maintain development, it undertakes strategic and targeted economic interventions, but it leaves the actual implementation to private industry. It directs and manages the industrialisation process, establishes the required infrastructure, draws in foreign investment, and selects the top strategic investment objectives.

Venturelli refers to this theory of promoting the information society as the East Asian Development Model. The telecommunications, television, and other media service industries have mainly remained state-controlled public monopolies, despite the fact that the manufacture of hardware is virtually entirely privately held. They have helped to boost the economy and the overall development of the country, but they haven't promoted the civic societies in these nations. These are well known for being inferior to the EU and the US. There is no significant portion of non-commercial public services that support the formation of communities and associations, and there is no educational system that cultivates independent judgment instead of rote learning thanks to the public media monopolies. Instead, they have restricted individuals' access to information via stringent freedom of information legislation and requirements for information providers to offer public service.

A liberalized business model that emerged with the worldwide trend toward liberalization and democracy in the 1980s and 1990s is mixed with this state-led growth. A corporatist strategy, which relies on tight collaboration between the major industrial conglomerates competing on the global market, their workforces, and the state, is the specific form this transition took in East Asia.The development of the information technology hardware businesses in these nations may benefit greatly from the state's engagement in this regard. They have great success in this industry. The logic of the state and the logic of the international market, however, often clash. East Asian social and cultural values are present. Family networks and interpersonal connections structure business operations, governmental organizations, and the connections between them. Unfavorable business circumstances and defaulted bank loans are prevented by personal and governmental protection from being immediately punished by the market or subject to independent oversight and supervision by financial authorities. The issue is not that the state and financial regulators are providing too much protection, but rather that this protection is ineffective and influenced by nearby corporate interests.

The second issue is the escalating tension between the condition of progress and the information or network society it has given rise to. Except for those that are most often used in e-commerce and the delivery of Internet services, the focus on hardware manufacturing and dissemination comes at the price of innovation in software and services. This focus is driven by a stage-based approach to development. The first step is to increase ICT industrial output, which will eventually result in widespread ICT acceptance among the general public. The development of advanced innovation, information services, and digital information skills will make up the last phase. But the issue is that the final stage may never come or might come considerably later than in other regions of the globe[8][10].The East Asian development- thinking state's conservative and bureaucratic nature clashes with the network society's constant innovation, adaptability, and openness requirements. Restrictions on free speech and even blatant Internet censorship contribute to the lack of openness and creativity in growing computer networks.

CONCLUSION

In conclusion, by establishing new social contexts that facilitate global connectedness, information exchange, and social engagement, media networks have changed the social landscape. For people, organizations, and politicians to effectively use media networks as social settings, they must be aware of their features, consequences, and difficulties. In the digital age, inclusive, responsible, and meaningful online interactions may be fostered by embracing the promise of media networks while addressing the hazards linked to them. It is essential for people, companies, and politicians to comprehend media networks as new social contexts. Through the development of digital literacy, critical thinking, and ethical online activity, people must learn to traverse the complexity of media networks. Media networks have the ability to improve communication, teamwork, and brand creation for businesses. Policymakers are essential in creating laws that protect people's rights, privacy, and safety while encouraging free speech and innovation.

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GLOBAL INFORMATION AND COMMUNICATION NETWORK

Neha Saroj*

*Assistant Professor,
Department of Media Studies,
Presidency University, Bangalore, INDIA
Email Id-neha.saroj@presidencyuniversity.in

ABSTRACT:

The global information and communication network, comprising interconnected digital systems, technologies, and infrastructure, has revolutionized the way information is accessed, shared, and disseminated across the world. This chapter explores the concept of the global information and communication network, examining its structure, impact, and implications for individuals, societies, and the global community.The global information and communication network encompasses a vast array of interconnected technologies and platforms, including the internet, telecommunications networks, satellites, and digital devices. These interconnected systems facilitate the seamless exchange of information and communication across geographical boundaries, connecting individuals, organizations, and nations in unprecedented ways.

KEYWORDS: *Connectivity, Data Transmission, Digital Divide, Global Communication, Internet Infrastructure, Network Protocols.*

INTRODUCTION

One blatant example of coupled and unequal development is the integration of Third World nations into the global information and communication networks. It is combined because every nation in the globe has access to data networks like the Internet, the global television system, and the international telephone system. There is a tiny elite with access to and knowledge of modern media in every nation. The adjective small is relative since, as is believed to be the case in India, the elite may number in the millions. These members of the elite are employed in the cities and network hubs throughout the world. The majority of the nodes are research centers for business and government, financial markets, regional offices of multinational firms, software development teams, and defense or security organizations[1][3].

However, since the vast mass of the people has no involvement at all, the progress is also unequal and becoming more so. When compared to the spread of new media in the hubs of their own countries, and even more so when compared to the industrialized nations, it lags behind. Even traditional media like the telephone, radio, TV, and newspaper, as well as necessities like power, are mostly inaccessible to this majority. The usage of computers and Internet connectivity has dramatically increased in nations like China and India. Hundreds of millions of members of their fast expanding middle class have already embraced the information and network society. China and India often have two economies, however. The bulk of their people continue to live in poverty and are far behind.

The organic growth needed in underdeveloped nations is subordinated to the networks and dynamics of the global economy as a result of this mixed and unequal development. For applications in agriculture, health, education, public works, water resources, public transportation, public information, population planning, rural and urban land development, or public utilities, the few computers and network connections in developing nations are hardly ever employed. Instead, the military, executive arms of government, multinational enterprises, banks, significant universities, and research institutions employ them.The various approaches and models to create an information society in the Third World are discussed in the last paragraph. The models put out in this region of the globe have not been addressed by Venturelli. I'll add four more tactics or models.

The first tactic is to use a staged approach, much as in East Asia. This entails establishing the technological framework and fostering a regional ICT and software development sector. Investing in operational digital skills is the second step, first for the population as a whole and subsequently for those who most need them. The development of consumption applications for the general public is the last step. Government policy may become more focused on commercial access at the expense of equal access as a result of this tactic. This tactic ties up with policies supporting globalization and the above-discussed liberal market concepts.An expedited version of the stage technique constitutes a second tactic. It is thought to be possible for a Third World nation to skip development stages and move straight to the production of ICT in industrial enclaves connected to the global market, as in some East Asian nations, Costa Rica, and India, which concentrates on software programming. Wireless technology and affordable terminal devices might be used to build a technological infrastructure relatively fast. This route is one of the alternatives James offers addressing the digital gap in the Third World.

The third tactic adopts the stage approach's opposing viewpoint. According to this interpretation, Third World nations may advance only gradually from their present state of development. The widespread use of ICTs is not now a priority. All of the effort should go toward enhancing the fundamental material and human resources. This refers to things like power, transportation, health, conventional education, and traditional mass media.The ultimate plan suggests that investments in technological infrastructure, education, and all types of use applications should be implemented concurrently, rejecting all stage methods. To take advantage of the potential benefits of ICTs, Mansell and When contend that developing countries must discover methods to combine their already-existing social and technological strengths. They contend that although simultaneous investment in both talents is ideal, it is preferable to prioritize social capabilities when this does not seem to be attainable.

DISCUSSION

A variety of broad policy stances that are related to the earlier results. They are broad since an action plan of any type is not planned because it would rapidly become outdated. Seven key strategic factors are introduced by networks as the nervous system of our society: access, security, design, control, legality, returns, and content. They will lay forth the foundation for any specific policy that may be put out. Now that I have identified a number of explicit social values that I believe are at stake in this book, I will discuss them in relation to those values as I go along. These values include: the quantity and quality of social relationships, social equality,

democracy, safety, personal autonomy, freedom of information and communication, and the richness of the human mind.

Networks' Strategic Qualities

Access to networks must be the most important quality if it is true that networks are evolving into our society's nervous system. Social exclusion simply refers to access limitations or lack thereof. I have claimed in this book that those who lack access will be seen as inferior citizens, shoppers, employees, students, and community members. Access is a multifaceted topic however, and I've separated it into motivational, material, skills, and use access. What is the best way to carry out each of them?Motivation and material access are the two main types of access. It is difficult to change people's computer use motivation. It necessitates increasing technology's usability and accessibility. Additionally, it urges for legislation and other steps to ban the repulsive behaviors that many individuals encounter while using computers and the Internet. The kind of access that can be most immediately manifested by policy is physical access. Two policy tenets are often met in this context: the accomplishment of universal access and universal service.

The availability of a link to a computer and a network on an equal basis for everyone is referred to as universal access. The availability or supply of the services that everyone requires on this physical infrastructure is known as universal service. For there to be universal service, there must be universal access. Together, the concepts of universal access and universal service may be summed up as access to a defined minimum service of specified quality to all users independent of their geographical loca- tion and, in light of specific national conditions, at an affordable price. This telecommunications paradigm may be used to broadband connections in the near future as well as to email on the Internet. However, this idea hasn't been fully applied anyplace as of yet. Since immediate realization seems to be unattainable, all nations take a backward step to realize the ideals of open access. In affluent nations, this refers to access in public spaces like schools, libraries, and other buildings. In many developing nations, the goal is to link every village or city neighborhood with telecentres, kiosks, or Internet cafés[4][6].

In most industrialized societies, having universal access to houses is a feasible possibility. in this case, public access might be seen as a secondary alternative that does not allow for full participation in the network society. Public access, however, may be the sole choice for the vast majority of people in poor nations. In this case, public spaces might be perfectly suitable for hosting community events and teaching digital skills.The initial services necessary for utilizing the physical infrastructure are the communications services required to utilize the connection. The other services are content-related. Together, these services may be regarded as the fundamental information and communication services that each member of a network society requires:Basic connectionsincluding broadband, email, and Internet connections into all infrastructures' universal telecommunications service. Public broadcasting, essential community information services, and government information are three examples of public information and communication.Basic alarm features and health information and communication. Information on elementary and secondary schools that are required to be attended is supplied.One of the few nations in the world with a universal service fund that uses a limited portion of telecommu- nication rates to support public access for schools and libraries, i.e. just the connections

mentioned in item 1 above, is the United States. The EU is focused on public service, which includes the rules mentioned in items 2, 3, and 4.

Realizing the essential circumstances is critical, but spreading digital skills and increasing the quantity and diversity of network applications utilized are more crucial for improving equitable access. The present educational programs must be transformed on all levels in order to make this investment. For specific educational policy tools, see Soloman et al. and van Dijk.When networks take on the role of society's nervous system, when they fail, society as an organism will either come to a complete stop or at the very least experience a severe crisis. The dissolution of society may even come to pass, which is perhaps the greatest fear sociologists could ever have. This is just one side of the tale, however. The other is the potential for networks to ensure the security of people, businesses, and society at large. Alarm and security systems may be a huge improvement for the aged, disabled, and sick. Systems for monitoring and recording activity may contribute to the preservation of the natural environment, the security of organizations in general, and the efficiency of manufacturing operations in particular. The security of the state, both internally and externally, is enhanced through various registration systems.

In many ways, we are moving toward a risk-free culture. Networks help to lower hazards at every level. States experience less surprise because they are better aware of the attitudes and behaviors of their constituents. Because individual businesses have access to more information about their inventory and daily client demand, they are less likely to experience overproduction. Finally, since people have more control over their connections, they need to speak less with strangers, unwelcome callers, and letter writers.In other ways, the use of network technology raises the hazards to society, businesses, and people. This has a technical as well as a social component. The constant risk of a failure of vital links is the technical dimension. The social component is the possible lack of confidence that individuals may have in one another and in network communication when they communicate online rather than in person.

Networks show themselves to be a very weak kind of technology. The leadership of modern governments and businesses blatantly underestimates this danger. They don't use all due prudence. Rarely are backup systems accessible. In actuality, they watch for the next catastrophe. After the leadership decides whether to build a network or get access to communal networks, their social unit depends on a risky technology. Technology may also put more demand on communication systems. Vital portions of communications may sometimes no longer be sent or understood if there is a malfunction.Security-related actions can have paradoxical results. they could make other areas less secure. Another issue is that these policies conflict with other principles. The Internet's status as a largely open and decentralized network would be fundamentally altered by, for instance, initiatives to introduce more intelligence into public networks in order to track the sources, destinations, and types of communications included in packets for security concerns.

If we wish to defend this quality, it would be better if the system had the majority of its intelligence stored in the terminals and was as 'empty' as possible to make it less susceptible to technological failures. They are after all interchangeable and controllable locally. The same holds true for small-scale networks that are connectable, as opposed to large-scale networks. The likelihood that the second option will be chosen by the existing governments and commercial

interests is low. In any case, this will make it very evident that these seemingly technical judgments are really political ones.In contrast to human persons, communities do not have an innate neurological system. They were created with some degree of purposeful design. For humans, creating a social network involves some degree of deliberate action. Building media networks is always a technological and organizational design issue. However, they are not constructed in accordance with a well-thought-out local and national government plan, like roadways. Parliaments and other governmental organizations seldom ever address the design and infrastructure of media networks. For a technology that is so vital to society, this is really a pretty odd state of things. The two primary causes have already been mentioned. First, throughout the 1980s and 1990s, this social infrastructure was significantly privatized and liberalized. Second, those in power and in parliaments often lack the knowledge and the ability to see the big picture.

In the past, both public and private entities developed the telecommunication and mass communication networks in accordance with signs of extensive governmental control. The mass communication downstream broadcasting and the central exchanges of telecommunication were both centralized in their architecture. With the development of the Internet and packet switching, data transmission, which was initially developed by tele-communication operators, became decentralized. People from the US Departments of Defense, Education, and Commerce collaborated with academics from American institutions to create the Internet. Both the military and academics favored a decentralized, attack-resistant network. The Telecommunication and Infrastructure Administration and the US Department of Commerce thought that this would encourage more privatization and the easing of governmental restrictions in the US and throughout the globe.

The Internet community seized the opportunity presented by the World Wide Web's explosive expansion to enhance its peer-to-peer and decentralized characteristics as a superior public network. Governments, technical experts, and commercial interests have pushed to restore control over the Internet, nevertheless, since the end of the 1990s, for the sake of both security and trade. Businesses, governments, IT companies, and Internet users are now engaged in a bitter battle for control of the Internet. This conflict was detailed in 6. It seems that the Internet's architectural layout is taking on more significance. It seems that debates over 'codes', like protocols and other standards, are really political debates. The first thing that should strike us here is the fact that most Internet users and the general public are mostly unaware of these issues. Only specialists are aware of them. Even the majority of politicians serving in parliaments and administrations are unaware of the risks. This implies that the infrastructure of our future civilizations will be entirely de- mocratic in design. It is critically necessary for society to have a wide conversation, beginning with the online community[6][8].

The second finding is that, after the privatization and liberalization of communication networks, the market has been entirely placed in charge of building this crucial societal infrastructure. This applies to the construction, upkeep, and management of these networks as well as the overwhelming majority of their content offerings. It also applies to the technical architecture of the networks, including their centers, cables, and terminals. I demonstrated in Chapter 4 how this results in the parallel creation of numerous information superhighways. Although this may result in efficient technological competition, it is also wasteful from the perspective of society as a

whole. Additionally, the infrastructure won't be constructed using design principles that avoid issues at higher levels. At these levels, the conundrum of needing to balance the freedom of information and communication, privacy, security, and property rights against one another becomes apparent. This is the area where the problem is'solved' by cryptic choices made on protocols, encryption, access codes, filters, digital signatures, and other codes.

The proprietary software and de facto standards of US software corporations like Microsoft, Google, Yahoo, and Computer Associates have a very significant impact on the architecture of a public network like the Internet. It has sparked an open-source movement inside the Internet community that is creating open source and open code software. For the future of the Internet, the outcome of the conflict between proprietary and open software will be essential.Would it not be preferable if democratic governments, much as they do for our road systems, designed the fundamental network architecture of society after extensive consultation with all interests? Businesses may then be charged with developing the infrastructure in accordance with the guidelines established by democratic decision-making. Aside from the fundamental public services, all building or maintenance work as well as all content services might be left to the market and to the public's contributions to the open-source movement.

Democracy

The fight for the network society's nervous system design is also a fight for its control, which entails future freedom and democracy. The end result establishes guidelines for network users' personal liberty and privacy.The architecture of computer networks has the potential to lead to both centralization and decentralization, as almost every chapter in this book has noted. This also holds true for making decisions. The centralizing effect of networks, however, is initially stronger than the decentralizing effect because the initiative for the development and introduction of networks is typically taken entirely by central management, because network technology is very complex, and because it is suitable for central registration and control. Large organizational units do, however, quickly reach the boundaries of centralized control. Additionally, it is generally established that local execution with larger margins stimulates employee, citizen, and customer motivation. This is the reason why in both economic organizations and political institutions, flexible control of all types and managed or directed decentralization are becoming more and more common.

Government and regulation should address the emergence of sizable commercial oligopolies in telecommunications, data, and mass communication in order to preserve economic democracy. The tele data, and mass communication sectors' technological convergence encourages corporate consolidation inside and between these three industries. Fewer than 10 businesses will soon control the global market in each of them. They will gain an excessive amount of control over the communication policy of nations, businesses, and homes. Democratically speaking, this is hardly a sign of advancement. At least the public monopolies were subject to democratic oversight.It has become clear from the perspective of political democracy that conventional authoritarian authority is gravely threatened by information and communication networks. In contrast, I made the case in Chapter 5 that new, creative methods to use these technologies to exert control, govern, and oversee are emerging. They provide governments the ability to take control of its inhabitants by combining various types of registrations and engaging in data

mining. On the other hand, people themselves may use these same networks to request better information and to participate more actively in political decision-making.

Different strategic focuses are used by politicians and government employees in relation to new media. In paragraph five, I discussed how certain people are use them to reinforce institutional politics and the state. Their goal is to establish a powerful and effective state that can compete with transnational crime and terrorism, that is less expensive, and that operates more effectively. Some people utilize new media or networks to promote politics and democracy in civil society and to give citizens more influence. It is impossible to establish which strategic orientation is the best since it entirely relies on the individual's political philosophy.The development of the digital divide, as seen in 7, will determine the social democracy of new media consumption. In the network society, information inequality is most likely to worsen. However, it is imperative to prevent the tripartite network society depicted in this book from becoming a structural aspect of society and resulting in the creation of first, second, and third class citizens, workers, students, and consumers. This society is comprised of a relatively small information elite, a more-or-less participating majority, and a relatively large minority of excluded people. For the policy tools I would advise, see van Dijk.

Networks naturally reduce some of the autonomy of people linked since they are systems. In most cases, there is little option as to whether or not citizens, workers, customers, or consumers will be linked to such networks. Additionally, they have limited control over consumption once linked. Increasing user options is one strategy to address this issue. another is giving the organizations representing these people greater control and expanding the scope of their influence. This is especially true for employee organizations. Any organization will use networks as a structural component rather than just a technological tool. But in the rare instances when employee groups have been permitted to intervene in network technology, they haven't had much experience with things like organizational structure, management tactics, and information control.

Consumer and citizen groups are the second category of organizations that should organize personal liberty and choice. The design and regulation of these goods, in this instance e-commerce and e-government networks, as well as the accessibility of the remaining non-electronic alternatives, should also be discussed in addition to final items and costs. Of course, users as individuals and user groups themselves make up the third class. Is it not amazing that, despite their seeming interactivity, user groups of popular and potentially vitally important websites seldom have any input on their design and services? The only choice people often have when they're dissatisfied is to click away and visit a rival website.In comparison to earlier information and communication approaches, the emergence of networks suggests a higher danger to the informational and relational privacy of people. The coupling, integration, and traceability of files as well as people's everyday habits pose a concern.

The majority of nations lack adequate privacy laws. The EU has one that is the finest in principle and is used as an example by many other nations, but its effectiveness in actual use is yet unknown. Network activity is still illusive. This is especially true of the Internet, which is little controlled and transcends all borders. Forms of individual and group self-regulation and technology means of protection will take the lead when legal choices are insufficient. Research

projects focusing on cutting-edge encryption and digital anonymity methods should be sponsored, and self-regulation of codes of behavior and rating systems should be encouraged. However, I have suggested that the only long-term answer is a mix of legislative, self-regulatory, and technological measures.

The sadness is that the law itself, especially current legislation, is being undercut by this technology. We expect the law to provide some protection against the improper use of network technology. Governments and lawmakers respond by stating that whatever that happens offline should likewise happen online. This could be a sound premise at the beginning of a new technology, but over time, it falls short of the unique qualities of computer networks. The boundaries between public and private concerns and between collective and individual property rights are not well defined in these networks, which largely trade virtual commodities and services rather than tangible ones.

Each nation will need to create framework law for these new online realities that weighs at least three basic rights against one another: the freedom of information and communication, the protection of society and the rights of the person, and the protection of property rights. The constitutions of the relevant nations should serve as the groundwork for this framework in the first place. For the following types of applications: information, consultation, registration, transaction, discussion, and amusement, it should then define the terms public and private, collective and individual, virtual and physical, national and international. Formal laws relating to the three rights above outlined may be created or amended within the constraints of this framework.I have emphasized several times that governments and regulations alone cannot address the issues with legality in networks. All forms of self-regulation developed and maintained by organizations, user groups, and individual users themselves must be included to legislation. International agreements between governments will also need to be negotiated in a variety of international venues in order for national legislation to be effective across borders. Technology-based security measures using encryption and other codes in software or hardware are the third instrument. Technology protection should be included into self-regulation and law since it is a double-edged sword that may be exploited by both good and harmful actors.What benefits do media networks' creation and usage provide to society?

The new communication technology seems to have a favorable impact on economic development over the long and short terms. In this book, I have noticed that it aids in resolving general bottlenecks in the economy and society, such as bureaucratic organization, a congested and polluted transportation and regional planning infrastructure, and a persistent lack of communication in a society that is becoming more differentiated, fragmented, and individualized. Short-term improvements in manufacturing and distribution processes, as well as office work, will result from the new media's potent communication capabilities. The process advances I have summed up as the flow economy depend on these abilities. Along with increasing efficiency and effectiveness, they also contribute to cost savings in terms of the use of resources during manufacturing, such as energy and materials. Therefore, they could contribute to the preservation of the ecosystem. Additionally, there will be increased control over all manufacturing processes. The broad chains of businesses and other organizations, as well as the

growing division of labor inside these organizations, are now impossible to manage without media networks.

The increasingly uneven distribution of this broad increase in economic prosperity is the major issue. The dissemination, use, and consequences of network technology on the social and economic environment are all quite selective. It encourages a propensity for the combined and unequal growth of nations worldwide. Locally, it aids in the creation of dual economies that are both directly connected to and unconnected from the world's information infrastructure.Every local, regional, and national economic policy is impacted by this situation. According to policymakers, local governments may urge businesses to locate their facilities in their area, which will boost economic activity across the state or region. However, the multinational corporations really choose their own tastes and interests on a worldwide level. They don't affect a region's or state's overall organic growth and solely contribute to a single sector of the economy. In the future, these particular assets of nations and regions will be even more significant. It will lead to unequal growth that local authorities will have little influence over, except possibly by highlighting the region's advantageous qualities. The only way to permanently address the issue of unequal development is to build global political, economic, and regulatory institutions.

Overall, ICT generates very few employment in the near run. The decline in labor costs for support and maintenance of new infrastructures and equipment, particularly in telephone and cable networks, cannot be offset by the creation of new services, transportation, operations, or equipment manufacturing. However, due to labor-saving data communications, the network sector does result in the decrease of many current operations in manufacturing, distribution, and administration. However, the current authorities actually have no choice but to support this technology. Network technology is becoming the foundation of every technical advancement deemed essential for long-term economic prosperity. The information economy and innovation in contract services are the way of the future, according to all analysts and decision-makers. The great majority of new jobs in the future will result from this. The preceding discussion's nations all have distinctive approaches to innovation. Since it has the most competitive market and a highly lenient immigration policy that welcomes ICT professionals and students from all over the globe to work and study there, the United States has historically been the most prosperous nation. However, since it is cutting down on public education and because bridging the digital gap is not seen as a priority, the United States runs the danger of limiting the basis for innovation inside its own people.

In terms of innovation, the aging continent of Europe struggles to keep up with the United States and East Asia. Because of its extensive and diverse cultural legacy, Europe offers strong advantages for creativity. But due of legislation, national protectionism, and activity fragmentation, it struggles to organize these assets. East Asia continues to prioritize hardware innovation. It seems challenging to innovate in the software, content services, and creative knowledge economy as a whole. Future stagnation may result from this. A brain drain of young, creative academics and students from the Third World is occurring to the developed world. Fortunately, many of them subsequently go back to their own nations. However, they often

remain in the dual-economy enclaves that are directly connected to the global information infrastructure, which predominantly benefits industrialized nations[9][11].

CONCLUSION

In conclusion, the way information is accessed, exchanged, and conveyed on a worldwide scale has changed as a result of the development of the global information and communication network. For people, societies, and the global community as a whole, understanding the structure, consequences, and effects of this network is crucial. Inclusionary access, responsible usage, and the beneficial effects of the global information and communication network on people, society, and global interconnectivity are promoted through embracing its promise while addressing obstacles. For people, politicians, and international stakeholders, it is essential to comprehend the dynamics of the global information and communication network. To traverse this large network, assess information critically, and act responsibly online, people require digital literacy skills. To create a just and inclusive global communication environment, policymakers must address problems of access, digital rights, and laws. To fully use the potential of the global information and communication network for sustainable development, intercultural understanding, and overcoming global issues, global cooperation and collaboration are required.

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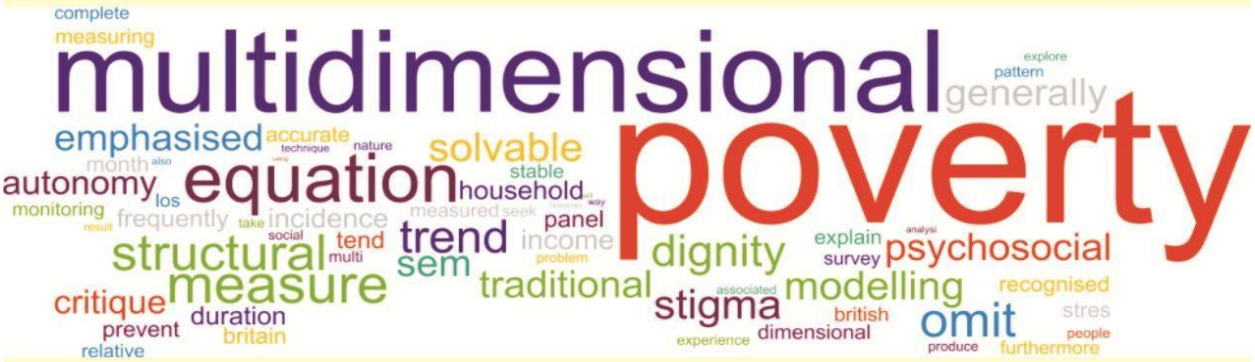

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