# EXEGESIS OF DIGITAL DIVIDE IN COMMUNICATION

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**Abstract**

Digital communication is undoubtedly regarded as a revolutionized communication which has transformed the not just the ontology but the epistemology of communication and its process as a whole. It should also be noted that the digital communication has created gaps in the communication process which has a discernible impact on the society. Having said that the impact of technology on communication can neither be undermined nor overlooked; rather its potential can be attempted to be used in the best of its possibilities. To do that it is imperative to understand the hindrances in its way. This brings us to the discourse of digital divide.

The word communication is derived from the Latin words, "communis" and "communicare". "Communis" means sharing, can be of views, ideas, thoughts and happenings; while "communicare" means make something common. With these inferences, digital communication can be defined as 'sharing of common views or ideas in a digital form'. The above understanding of digital communication becomes the genesis of the discourse as digital communication gets restricted only to its users. Against this backdrop, the study attempts to analyze the undermining of the semantic understandings of the epistemology of communication and how it has deviated from its basic meaning to accept the new paradigms, which fortunately or unfortunately nurtures a power inequality and creates a divide between information "haves" and "have-nots" on local, national and international levels.

**History and Origin of Divides**

Irony of the term "divide" is that it is used for equal distribution or sharing but as a matter of fact it is an institutionalized form of inequality. Although inequality has been in existence since the existence of nature itself; inspite of the fact that inequality meaning imbalance, is not encouraged by nature. Time again this inequality has been used by man, at various levels, for his selfish motives. The inequalities between man and nature; and man and man had been noticed and spelled out by various philosophers time and again. The exponent of the Social Contract Theory, Hobbes has specifically said in this Leviathan that in the state of nature man needs nothing but a selfish pleasure; and only in self –interest and self-preservence man compromise to surrender himself to the state and enters into a contract with the other elements of the state.

The industrial revolution became another watermark of inequality vis-à-vis divide. The socio-political, cultural and economic divides were all evident in the names of 'advancement' and 'development'. The advent of capitalism laid the foundation of first institutionalization of inequality of man. The 'advanced' industrial societies witnessed the divides so much so that it achieved prominence in the society. Divides between rural and urban socio-economic class was created at one level; and divide between "haves" and "have-nots" realized its genesis. The divide of industrialization and agricultural got widened with time and space and could never got filled in. Industrialization and modernization precipitated divides within divides. The economic divide facilitated the power politics and warfare across globe.

The process continued well into the 21st century, with citizens of the nation states dispersing over the entire globe, making World a 'global village'. The large scale displacement of people from their original habitats and their subsequent unison in various centers dappled across the globe has, as one sociologist prefers to say, given rise to the modern gesselschaft societies. This again led to a change in the relationship between a man and man, and subsequently a man and the nature.

At the national level, while these divides have manifested themselves in the form of caste, class, creed, linguistic and race. Whereas, at the international level, these have manifested in the pejorative discourse of development and modernization and bred technological and colour hegemony. The "clash of civilizations" has emerged as one of the greatest divisions of mankind. "Divide" and "differentiation" are the key words in this clash. The propensity to find social, economic, cultural and technological divides between man and man goes to prove that divides are never restricted to a category. Furthermore, it explicates that all these divides are only involuntary to something much more embryonic and crucial. Notwithstanding the plethora of social and economic theories of egalitarianism, inequalities ossify the divides.

**The digital divide**

Benjamin M. Compaine in his book The digital divide: facing a crisis or creating a myth defined digital divide as 'the perceived gap between those who have access to the latest information technologies and those who do not'.[1]

The term 'digital divide' has been dealt with by scholars in different ways. Some portray it as a gap between info-rich and info-poor, as stated above, while others delineate it with the separation between 'information haves' and 'information have-nots'. To some it is a fissure between those who can effectively use the technology and those who cannot.

The cry of 'digital divide' entered the public discourse in the late 1990s first as a headline of an article by Steve Lohr in The New York Times and then as a subtitle of the second of the four NTIA (National Telecommunications and Information Agency) of United States reports.[2] Since then it has been dealt with by scholars to conceptualize and understand it and by governments and political authorities as a part of their national agenda.

Pippa Norris[3] also stresses the unequal distribution of technological opportunities, even in the most developed countries. But the question that looms large over this discussion is: does such disparity really exist or is it just a myth, as stated by many scholars? What are the reasons for the occurrence of such a gap or disparity? What are the means to measure this divide, on what grounds? And does it really matter?

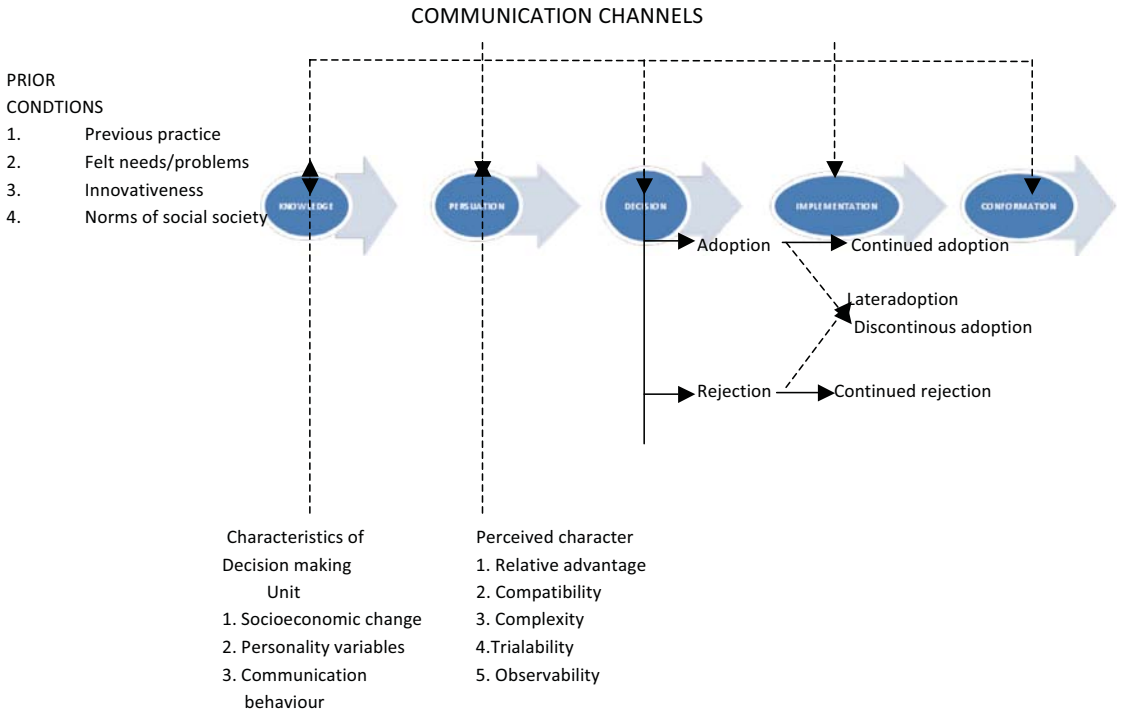
In Diffusion of innovation, taking technology as a synonym of innovation, Evernett M. Rogers defines technology as an instrumental action that fosters uncertainties. Rogers elucidates five stages of innovation-decision process.[4]

There are five stages of innovation in this model.

1. Knowledge is a stage of exposure of an individual to the existence of innovation. An individual as a decision maker gains understanding of the know-how, its functioning, and processing.

[1] Benjamin M. Compaine, ed., *The digital divide: facing a crisis or creating a myth*, M.I.T Press, U.S., 2001, p360.
[2] Barbara Monroe, *Crossing the digital divide: race, writing, and technology in the classroom*, Teachers College Press, Columbia, South America, 2004, p.6.
[3] See Pippa Norris, *Digital divide: civic engagement, information poverty, and the Internet worldwide*, Cambridge University Press, Cambridge, U.K., 2003.
[4] Evernett M. Rogers, *Diffusion of innovation*, Free Press, NY, U.S., 2003, pp.169-181.

2. Persuasion is a stage when an individual forms a favourable or unfavourable attitude towards an innovation.
3. Decision is the stage at which an individual either adopts or rejects an innovation and acts accordingly.
4. Implementation is a stage of putting the new idea into practice by the individual.
5. Confirmation is the stage when an individual reinforces his decision of acceptance or rejection. This becomes the final stage of the process. It is important to note that in this stage, at times there is a reversal of his decision as a result of his experience with the innovation in implementation stage and the problems arising therein.




Source: Diffusion of Innovation by E.M. Rogers

The outcome is that a wider socio-economic gap between the higher and lower socio-economic individuals is created in a social system between the individuals who accept or reject the technology vis-à-vis innovation. Scholars identify this innovative need paradox as one of the prime reasons for the digital divide.

Severin and Tankard in Communication Theories: Origins, Methods, and Uses in the Mass Media, underpins five major reasons for the knowledge gap.

1. **Communication skill** – Segments of higher socio-economic strata (SES) generally possess better communication skills, which help them in the 'basic information-processing task of reading, comprehending, and remembering'.
2. **Previously acquired knowledge** – There is a remarkable variation in the amount of information stored between people of high and low SES, which affects their capacity to acquire and retain new information.

3. **Relevant social contact** – Higher SES segments are more likely to be social and in contact with people who know about and are interested in and confer public or current affairs.
4. **Efficacy** – Lower SES segments tend to have lower self-efficacy and openness to gain new knowledge.
5. **Nature of mass media** – Mass media seem to be a taste of higher SES than the lower ones, as the lower ones tend to be busier in earning their bread and butter for the day.[5]

Another noted scholar R. M. Rubinyi identifies resources of organization as a major factor for the divide. Rubinyi categorizes the divide as a distinction between 'resource-rich' and 'resource-poor organizations'.[6] DiMaggio and Hargittai, while stepping beyond the binary view of digital inequality, have explained four steps towards the conception of inequality of digital technology opportunity:

1. **Identifying critical dimensions of inequality –** technical, autonomy of the use of technology, skill, social support, and purpose of using the technology.
2. **Documenting differences among groups**
3. **Explaining the antecedents of inequality on these dimensions**
4. **Modeling the relationship among different forms of inequality and between these critical outcomes**[7]

**Kinds/types of divides**

Karen Mossberger, Caroline J. Tolbert and Mary Stansbury, in their work Virtual inequality: beyond the digital divide,[8] say that in general this term is defined as the 'patterns of unequal access to information technology based on income, race, ethnicity, gender, age, and geography', but is much beyond that and the broader definition of the issue consists of multiple divides.

**The access divide –** which concentrates on the access of an individual to the internet, location of computer and Internet use and the frequency of use at each location.
**The skills divide –** includes the technical competence and the information literacy. The preference for assistance and attitude of an individual regarding public access are also looked at.
**The democratic divide –** the attitudes and experiences regarding Internet use for voting, registering to vote, looking up government formation, looking up for political information and debates are measured in this.
**Policy recommendations –** the differences in digital experiences faced by individuals and gauged in this.

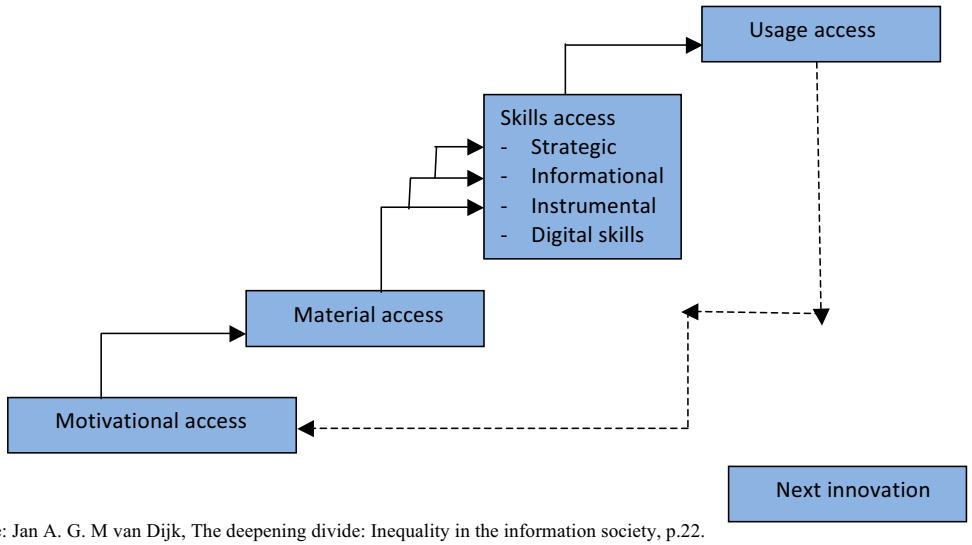
Jan A. G. M van Dijk, in his Cumulative and Recursive Model of Successive Kinds of Access to Digital Technologies, distinguishes the gap of "access" in four kinds:

1. **Motivational access –** motivation to use technology due to lack of opportunities, time, money, skills and outright rejection of the medium. It is a tussle of 'have nots' and 'want nots'.
2. **Material (physical) access –** possession of computers and Internet connections, permission to use the computers, Internet, and their content.

[5] W. J. Severine and J. W. Tankard, *Communication theories: origins, methods, and uses in the mass media*, Longman, NY, U.S., 2001, pp.255-258.
[6] R.M. Rubinyi, "Computers and community: the organizational impact", *Journal of communication*, vol.39, no.3, 1989, pp. 110-123.
[7] Paul DiMaggio and Eszter Hargittai, "From the 'digital divide' to 'digital inequality': studying Internet use as penetration increases", *Center for arts and cultural policy studies,* Working Paper, no. 15, Summer 2001, p.8.
[8] Karen Mossberger, C.J. Tolbert and Mary Stansbury, *Virtual inequality: Beyond the digital divide*, Georgetown University Press, Washington D.C., U.S., 2003, pp.1-9.

3. **Skills access –** possession of operational, informational and strategic digital skills to use Internet and its technologies. It includes the skills to search, select, process and apply information, along with other skills. Also, a strategic skill to use this information to improve one's position in society
4. **Usage access –** statistical calculation of the numbers and percentages of usage and the frequency of use, with usage time.[9]

**Cumulative and Recursive Model of Successive Kinds of Access to Digital Technologies**




Source: Jan A. G. M van Dijk, The deepening divide: Inequality in the information society, p.22.

The first, motivational access is conditional. If the physical access becomes successful, appropriation of new technology leads to the development of all kinds of digital and other skills. Both physical or material access and required skills are the premium requirement of the satisfactory use of the potential applications of the new media. These stages become recursive with every new innovation.

The categorical inequalities in society produce unequal distribution of resources, which causes unequal access to digital technologies. Equal access to digital technologies depends on the particular characteristics of these technologies, and as a matter of process brings about unequal participation in society. This in turn strengthens categorical inequalities and unequal distribution of resources.[10]

**Key terms and concepts in digital divide**

**Information**

Information serves as the primary component of the digital divide. It is a war of knowledge and information between those who have it and those who do not, whatever may be the reasons.

Toffler defines information as 'data that have been fitted into categories and classification schemes or other pattern'.[11] Explaining the term 'information' in detail, Buckland classifies 'information' into certain segments:

1. Data – records that can be stored on a computer,
2. Text and documents – papers, letters, books – that may be on paper, microfilm, or in electronic form,

[9] Jan A. G. M van Dijk, *The deepening divide: inequality in the information society*, Sage Publications, U.S., 2005, pp.21-22.
[10] Ibid, pp.14-15.
[11] Alvin Toffler, *Powershift: knowledge, wealth and power at the edge of the 21st century*, Bantam books, New York, U.S, 1990, p.18.

3. Objects – dinosaur bones, rock collections, and skeletons, and
4. Events – photos, news reports, and memoirs.[12]

In the digital age the forms of information have been digitalized into the language of 'bits' and 'bytes', '0s' and '1s'. In the language of '0s' and '1s' the data is transferred in the form of packets from one destination to another. Text, voices, photographs, and multimedia packages are hence transmitted in a speed faster than light through information super highway via satellite channels and wired (thinner than the strength of a hair) or wireless networks. This feature makes the means and modes of communication revolutionary.
As a sociologist, one should take into cognizance that technically there may not be a distinction between information and data. But, data is an unprocessed form of information: it becomes information only after it is perceived, processed, and understood.

**Social capital**
Social capital refers to the social organizations, institutions, and norms that shape and improve the quality of social interaction. It acts as an asset to a society in terms of their efficiency to remain connected and coordinated and gain access to power and resources. Putnam describes it as 'features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions'.[13] Taking the example of a diverse culture like India, which has a particular caste ridden society, Dekker and Uslaner relate it with the 'social networks bonding similar people and bridging between diverse people, with norms of reciprocity'.[14] Internet has an unprecedented potential to build social capital. The advent of social media or social networking sites like Facebook, Twitter, Orkut, etc. has fastened the ability of Internet on World Wide Web to further strengthen social capital of its own. This has been showcased very recently in cases like Obamacampaign.com in America, Egyptian movement, movement in Libya, and Anna Hazare's campaign in India.

Goslee's report points out that modern communication networks are an important tool for fostering civic engagement. [15] Civic engagement, according to Putnam, can lead to coordination and communication within a society at all levels. It advances the emergence of opinion leaders, who foster collective action for the common good and whet the people's
The agents of political socialization including families, communities, trusts, firms, civil society, public sector, ethnicity, gender, and others serve as sources of social capital.

**Public sphere**
The Internet is seen as an electronic public sphere by many scholars. Habermas relates the public sphere as a part of socio-political life in a society that leads to the origin and evolution of public opinion in that society.[16] It is a space 'where free and equal citizens come together to share information, to debate, to

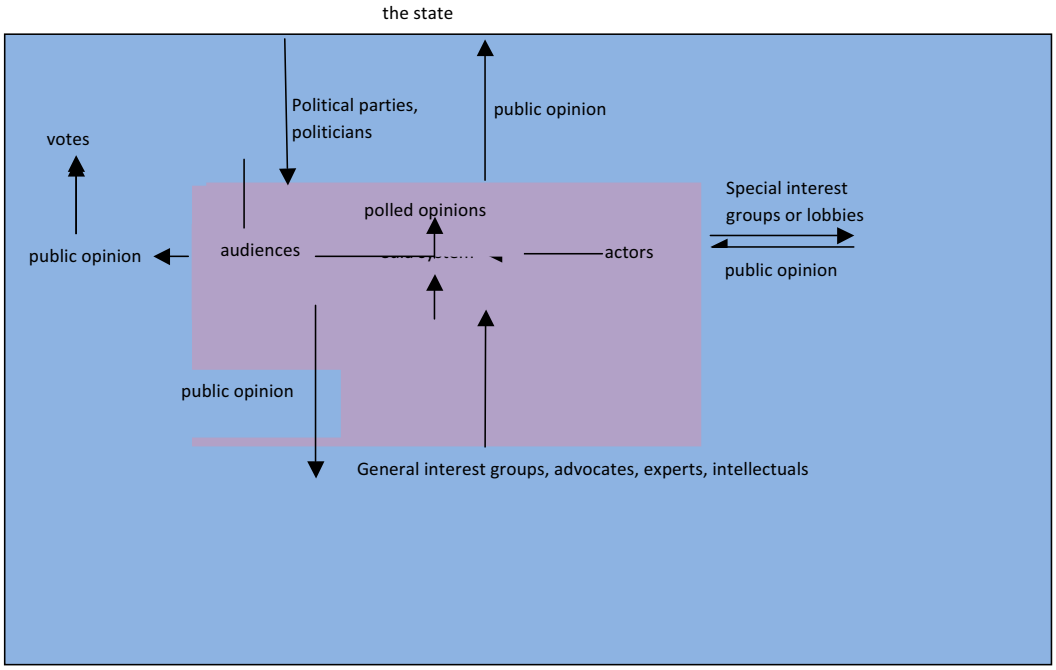
[12] Michael K. Buckland, "Information as thing", *Journal of the American society for information science (1986-1988)*, vol.42, no.5, June 1991, pp.351-360.
[13] Robert D. Putnam, *Making democracy work: civic traditions in modern Italy*, Princeton University Press, NJ, U.S., 1993, p.167.
[14] See Paul Decker and Eric M. Uslaner, *Social capital and participation in everyday life*, Routledge, London, U.K., New York, U.S., 2001.
[15] See S. Goslee, *Losing ground bit by bit: low income communities in the information age*, Benton Foundation, Washinton, U.S., 1998.
[16] See J. Habermas, *The structural transformation of the public sphere: an inquiry into a category of bourgeois society*, MIT Press, U.S.A, 1991.

discuss, or to deliberate on common concerns'.[17] Odugbemi defines democratic political sphere as 'a force for capable, responsive, and accountable government, and is a permanent, self-acting force'.[18]
He opines that the democratic public sphere possesses certain characteristics that include:-

- Constitutionally guaranteed civil liberties,
- Free and plural media system,
- Access to public information,
- A public political culture of debate and discussion on issues of common concern,
- Equal access to public sphere.

The actors of this public sphere, according to him, are the public, the civil society, public officials, the media and private actors like interest groups and pressure groups.
Thomas Jacobson and Antonio G. Lambino II refer to public sphere as a complex process whole. Borrowing their Input-Output model of the structure from Habermas, they regard it as an intermediary system, in which information flows in and out of the mediated public sphere.

**The Public sphere: Inputs and Outputs**




Source: Thomas Jacobson and Antonio G. Lambino II, Governance reform under real world conditions, p 46.

In the model of input-output public sphere all the elements of the sphere need to play an active role in the public sphere to provide effective and transparent government.[19]

[17] A. Odugbemi, "Public Opinion, the Public Sphere, and Quality of Governance: An Exploration", in S. Odugbemi & T. Jacobson, eds., *Governance reform under real-world conditions: citizens, stakeholders, and voice,* The World Bank, Washington, D.C.,U.S., 2008, p. 15-37.
[18] ibid, p.29.

To sum up, public sphere is a platform that can act as a catalyst of functions in a socio-political setup, more so in a democratic setup. It can be a source of opportunities as well as threats in a society.

**Cyberspace**

Cyberspace, simply speaking, is a virtual space that stands for global network. When William Gibson first used this term in his fiction, "Neuromancer", it seemed to be a utopia, but is a reality of our times. Cyberspace today has emerged as a sphere which provides an opportunity to an individual to expand and extend his reach of communication and communication network. The so called 'netizens' are the actors in this space. This virtual sphere is different from public sphere in terms of the domination of those who have access to this resource and who possess skills and other technological abilities to use this sphere. This is where the question or the debate of digital divide comes into picture with use of virtual sphere as a public sphere. It surely seems lucrative with its unprecedented potential that can provide plethora of information to its users; also it provides the user a cloud to express them in socio-political public sphere. This surely gives them an ability to prove themselves as more powerful actors in the public sphere than those who are below this divide and do not have either access or skill to use this virtual space in the power polity.

**Conclusion**

The revolution of means and modes of communication in the digital era has provided us an opportunity to reach out to virtually limitless information in nano seconds. The diffusion of technology has a far reaching impact on the way people were sharing information since time immemorial. This has surely penetrated in their socio-political lives. The potential of new media, like an atom, in changing the ways of citizens' civic engagement is tremendous. But Digital Divide is a serpent hindering the growth of socio-political and economic equality, thereby devastating the real essence.

[19] Thomas Jacobson and Antonio G. Lambiono II, "Citizen voice and the public sphere: Scopoing communication challenges" , in S. Odugbemi & T. Jacobson, eds., *Governance Reform under Real-world Conditions. Citizens, Stakeholders, and voice,* The World Bank, Washington, D.C.,U.S., 2008, p. 39-63.