THEORIES & MODELS OF COMMUNICATION[*]

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1. COMMUNICATION

The word communication has a long and rich history. Since the beginning of time, the need to communicate has been a part of man's inherent being. The survival of mankind is due to their ability to communicate. Human race has communicated though different techniques and methods; the use of symbols, gestures, sounds, drawings and sign languages were some methods of communication used by the early man. Archaeological evidence shows that the early men were good artists and have been effectively communicating through the visual sense, the transmission, reception, or reproduction of sound and the study of body movements. Through the years communication has advanced with the development of technology. Hence it is clear that communication has assumed an immense importance in our time. (Littlejohn, 2002)

Etymologically, the word 'communicate' is derived from the Latin verb - *communicare, adjective - communis* and old French adjective - *comun.* The key root is '*mun*' stemming from the Latin word *'munus'* meaning to share publicly/ impart/ make common. Communication can thus be traced back to be derived from the old French term *comunicacion* and Latin word *communicatio (n-).* This clearly only means 'to share' and are 'common' to all. The word seems to have entered English language vocabulary in the 14th and 15th centuries. The term originally meant sharing of tangible things; food, land, goods, and property. Today, it is often applied to knowledge and information processed by living things or computers. Communication connects people and places. Thus, it is clear to understand that communication allows people to exchange their thoughts and ideas through speech, signals, writing, or behaviour. Basically, communication is shared feelings/shared understanding. People have always communicated, but the process of communication became the subject of study in the 20th Century. The serious study of communication was triggered by the development of technologies.

1.1. DEFINITIONS

Communication is a two-way process in which participants not only exchange ideas, feelings and information but also create and share meaning for reaching mutual understanding. It is the exchange of ideas, thoughts, messages, or the like, by speech, signals or writing. It is to express oneself in such a way that one is readily and clearly understood. It is a process of conveying information from the sender to the receiver with the use of the media in which the communicated information is understood.

Communication is the expression or exchange of information by speech, writing, gestures, conduct or electronic medium. It is a process of passing information, ideas, facts, or opinions between two or more parties. It is the process by which an idea is brought to another 's perception. The information that is so expressed or exchanged is also referred to as communication. It is a complex and dynamic process that allows organisms to exchange information by several methods.

To quote a few, select definitions on communication:

US ARMY: "Communication is the exchange and flow of information and ideas from one person to another; it involves a sender transmitting an idea, information, or feeling to a receiver."

William Rice-Johnson: "A communication takes place when one individual, a sender, displays, transmits or otherwise directs a set of symbols to another individual, a receiver, with the aim of changing something, either something the receiver is doing (or not doing) or changing his or her world view. This set of symbols is typically described as a message."

Pranav Mistry: "Effective communication occurs only if the receiver understands the exact information or idea that the sender intended to transmit. Many of the

problems that occur in an organization are the either the direct result of people failing to communicate and/or processes, which leads to confusion and can cause good plans to fail."

Peter Drucker; "The most important thing in communication is hearing what isn't said."

Conrad & Poole: "Communication is the process by which people interactively create, sustain and manage meaning"

1.2. COMPONENTS OF COMMUNICATION

Communication comprises of 8 major components, which are the objects of study of Communication Theory. These are interdependent and are considered as basic elements of any communication process. They include:

Source - which "*produces a message or sequence of messages to be communicated to the receiving terminal.*"

Sender refers to *transmitter*, which "*operates on the message in some way to produce a signal suitable for transmission over the channel*".[1] Aristotle uses the term *speaker* (orator)'' to refer to this component.

Channel is "*merely the medium used to transmit the signal from transmitter to receiver*''.

Receiver "*performs the inverse operation of that done by the transmitter, reconstructing the message from the signal.*"

Destination is "*the person (or thing) for whom the message is intended*".

Message is derived from Latin word *mittere*, meaning "to send". It refers to a concept, information, communication or statement that is sent in a oral/ graphic/written/audio/visual/audio-visual form to the recipient.

Feedback is the loop of making a two-way communication process related to the response to the message. It is simply the reaction of the Destination back to the Source, direct and/or indirect.

Context is considered as a very significant component as it decides the given communication process and fixes all the above said 7 components. It refers to the background and the environment – immediate and far. Space and time play a larger role of a given communication. A good communication means different things to different (or even same) people at different times.

Three other elements associated with the process of communication are: **Entropy, Redundancy and Noise.** Entropy is a measure of the amount of uncertainty in the message/content. Redundancy either knowingly or unknowingly enters the communication process. If deliberate, it serves the purpose of reiterating the message; otherwise repetitiveness is undesired element. Noise is actually anything irrelevant, unwarranted, undesired and hence, a disturbance/interference to effective transmission. Noise is anything that disrupts or interferes with the effective communication process. Noise can be physical, psychological or semantic and can disturb the communication process at any point; noise may be associated with any element in the system:

- Physical noise or external noise are environmental distractions such as startling sounds, appearances of things, music playing somewhere else, and someone talking really loudly near you, etc;
- Physiological noise are biological influences that distract one from effectively communicating; these could include sweaty palms, pounding heart, butterfly in the stomach, induced by speech anxiety, or feeling sick, exhausted at work, the ringing noise in your ear, being really hungry, and if you have a runny nose or a cough.
- Psychological noise are the preconceived bias and assumptions such as thinking someone who speaks like a valley girl is dumb, or someone from a foreign country can't speak English well so you speak loudly and slowly to them.
- Semantic noise is word choices that are confusing and may have the effect of distorting the meaning.

1.3. CLASIFICATION

Human communication may be broadly classified as:

- o Intrapersonal
- o Interpersonal
- o Group Dynamics
- o Public/Mass
- o Organization
- o Cross cultural

Any of the above, depending on the choice of the medium, may be classified further as verbal, non-verbal/bodily and graphic communication. Whatever may be the type human communication is associated with subjectivity.

1.4. THEORIES & MODELS

The term **'theory'** is often intimidating to students. Theories provide an abstract understanding of a process, Miller says. It is simply a summary of a process. Hoover (1984) defines it as *"a set of inter-related propositions that suggest why events occur in the manner that they do"*. Foss, Foss and Griffin (1999) defines theory as, *"a way of framing an experience or event—an effort to understand and account for something and the way it functions in the world"*. Any thoughts or ideas about how things work in the world or one's life are personal theories. Theories are essentially frameworks for how the world works, and therefore guide how to function in the world. Theory is an idea of how something happens. It is an attempt to explain or represent an experience. The term communication theory may refer to a single theory or an entire set of theories related to communication. "Theories are not just things to be read and learned. They are constantly evolving works." (Littlejohn, 2002, p. 25)

The origin of the word **'Model'** could be traced to the French word *modèle*; Italian *modello*, diminutive of *modo*, *form*, and Latin modus, *measure, standard*; Model refers to representation/replica of the original. A model is thus a schematic description of a system, theory, or phenomenon that accounts for its known or inferred properties and may be used for further study of its characteristics.

Communication models seek to represent the structure and key elements of the communication process.

2. COMMUNICATION THEORIES

In a field like Communication, theories are important to understand because they directly impact our daily lives. The first function communication theories serve is that they help us organize and understand our communication experiences. A second function is that they help us choose what communicative behaviours to study. A third function is that they help us broaden our understanding of human communication. And the fourth function is that they help us predict and control our communication. A fifth function of theories is that they help us challenge current social and cultural realities and provide new ways of thinking and living. While theories serve many useful functions, these functions do not really matter if we do not have well-developed theories that provide a good representation of how our world works. Littlejohn considers a communication theory to be "any conceptual representation or explanation of the communication process"

2.1. EVOLUTION

Communication theory is the discipline that studies the principles of transmitting information and the methods by which it is delivered (as print or radio or television, etc.). It is an attempt to explain how and why humans communicate meaningfully with each other. Such theories can originate from a variety of different fields, including Psychology, Biology, and Philosophy, though the actual study of the nature of communication is a field in itself. At its core, a communication theory is generally devoted to providing an explanation of how, exactly, one individual is able to communicate meaning to another and the degree to which the speaker and the listener can understand each other. Other theories are more focused on the historical and ritual significance of communication as an essential element of culture. Such theories may focus on the broad cultural effects of communication instead of the specific process of transmitting meaning.

Interest in the concept of information grew following the development of telegraphy and telephony. In 1844 the American inventor Samuel F.B. Morse built a telegraph line between Washington, D.C., and Baltimore, Maryland. Morse encountered electrical problems when signals were sent via buried transmission lines, but inexplicably he encountered fewer problems when the lines were suspended on poles. This attracted the attention of many physicists, including the Scotsman William Thomson (Baron Kelvin). In a similar manner, the invention of the telephone in 1875 by Alexander Graham Bell and its subsequent proliferation attracted further scientific notaries, such as Henri Poincaré, Oliver Heaviside, and Michael Pupin, to the problems associated with transmitting signals over wires. Much of their work was done using Fourier analysis, but in all these the analysis was limited to solving the engineering problems of communication systems.

The origin of communication theory is linked to the development of information theory in the early 1920s. The formal study of information theory began in 1924, when Harry Nyquist, a researcher at Bell Laboratories, published a paper "*Certain Factors Affecting Telegraph Speed.*" Nyquist realized that communication channels had maximum data transmission rates, and he derived a formula for calculating these rates in finite bandwidth noiseless channels. The other pioneer was R.V.L. Hartley, whose paper "*Transmission of Information*" (1928) established the first mathematical foundations of information theory. Alan Turing in 1940 used similar ideas. But the real birth of modern information theory can be traced to Claude Shannon's paper "*A Mathematical Theory of Communication*" in the Bell System Technical Journal in 1948. An important aspect in Shannon's work was his realization that, in order to have a theory, communication signals must be treated in isolation from the meaning of the messages they transmit. This is in sharp contrast with the common conception of information, in which meaning has an essential role. Shannon also realized that the amount of knowledge conveyed by a signal is not directly related to the size of the message. This landmark paper paved the way for the development of communication theory. Shannon focused on the problem of how best to encode the information

that a sender wants to transmit. He also used probability theory. Shannon developed information entropy as a measure of the uncertainty in a message while essentially inventing the field of information theory. Shannon realized that a useful theory of information would first have to concentrate on the problems associated with sending and receiving messages, and it would have to leave questions involving any intrinsic meaning of a message - semantics - for later investigators. He realized that if the technical problem was not solved, then the semantic problem was not likely to be solved. Solving the technical problem was therefore the first step in developing a reliable communication system. Since Shannon worked for Bell Laboratories, the practical stimuli for his work came from the problems faced in creating a reliable telephone system. A key question was how to transmit the maximum number of telephone conversations over existing cables. Prior to Shannon's work, the factors in achieving maximum utilization were not clearly understood. Shannon defined and showed how to assign a capacity to communication channels, not only in the ideal situation where no noise was present but also in practical cases where channels were subjected to real noise. Shannon produced a formula that showed how the bandwidth of a channel (that is, its theoretical signal capacity) and its signal-to-noise ratio (a measure of interference) affected its capacity to carry signals. He suggested strategies for maximizing the capacity of a given channel and showed the limits of what was possible with a given technology.

Shannon also made the startling discovery that it is always possible to transmit signals arbitrarily close to the theoretical channel capacity even in the presence of noise. Before Shannon, engineers lacked a systematic way of analyzing and solving such problems. His discovery inspired engineers to look for practical techniques to improve performance in signal transmissions as Shannon's work clearly distinguished between gains that could be realized by adopting a different encoding scheme from gains that could be realized only by altering the communication system itself. Though information theory does not specify how to achieve specific results, people now know which questions are worth asking and

can focus on areas that will yield the highest return. They also know which questions are difficult to answer. Since the 1940s and '50s the principles of classical information theory have been applied to many fields. Subsequent to Shannon's Theory, several theories have evolved.

2.2. COMMUNICATION THEORIES

To quote Robert T Craig, from his landmark article, *Communication Theory as a Field* in 1999, "**(...)** *Although there exist many theories of communication (...) there is no consensus on communication theory as a field"*. Craig "proposes a vision for communication theory that takes a huge step toward unifying this rather disparate field and addressing its complexities." Craig focused on communication theory as a practical discipline and shows how "various traditions of communication theory can be engaged in dialogue on the practice of communication." Craig identifies seven different traditions of Communication Theory and outlines how each one of them would engage the others in dialogue.

- Rhetorical
- Semiotic
- Phenomenological
- Cybernetic
- Socio-Psychological
- Socio-cultural
- Critical

2.2.1. RHETORICAL THEORY

Rhetorical theory is said to have begun on the Island of Sicily when a dictator was overthrown, leaving landowners to argue in court over who rightfully owned the land - the original owners or those who had been given the land during the tyrant's regime? Under the Greek legal system of the time, individuals had to present their own cases in court - creating the need for individuals to become adept at the art of rhetoric. Corax can be credited with the first formal rhetorical theory; he wrote a treatise '*The Art of Rhetoric'* to assist those involved in the land disputes. In this,

he highlighted the importance of probability to rhetoric; a speaker should argue from general probabilities or create a probable connection or basis for belief when actual facts cannot be established. No longer confined to the public domains of classical Greece, rhetorical theorists study every kind of context in which symbol use occurs. Today, this means studying everything from intrapersonal to interpersonal to public discourse to social movements and mediated discourse. Rhetorical theories address what makes public, personal diaries as rhetoric, and television, the Internet, and Web sites as rhetorical artefacts. Thus rhetorical theory includes the study of visual and nonverbal elements, such as the study of art and architecture, buildings and all design elements of cities, and dress and appearance, to sports, to name a few. There is hardly anything that is part of the human experience that cannot be looked at from a rhetorical perspective. Rhetorical theory has also seen a shift away from a strict focus on persuasion. For some rhetorical theorists, all human symbol use is inherently *persuasive* - no matter what our intent, anything we say or write, whether intentional or not, affects those around us. Other rhetorical theorists continue to focus on delineating how persuasion works in new arenas for theorizing. Yet others question the *persuasive* act itself. In general the focus on persuasion and its possibilities has led to an ongoing interest among rhetorical theorists in rhetoric's relationship to social change.

2.2.2. SEMIOTIC THEORY

John Locke (1690) introduced the term 'semiotics' into the English language as a synonym for "doctrine of signs" (Latin: *doctrina signorum*, the oldest name for the study of what is now called 'semiosis' or "the action of signs"). There already existed in Locke's time (and long before) the Greek term $\Sigma\eta\mu\epsilon\iota\omega\tau\iota\kappa\grave{\eta}$, "semeiotics", to name that branch of medical science concerned with the study of symptoms of disease or $\sigma\eta\mu\epsilon\iota\alpha$ -'natural signs' in today's language. Research into sign systems began with the ancient Greeks, and in the course of Western history many writers and scholars have studied the various processes by means of which

signification is produced. In the modern world the major areas which have been the object of semiotic study are literature, environmental and social structures, visual and plastic arts, ritual, myth, pedagogy, and gesture. Consequently, semiotics is very much an interdisciplinary science. Semiotics is the science of communication and sign systems, of the ways people understand phenomena and organize them mentally, and of the ways in which they devise means for transmitting that understanding and for sharing it with others. Although natural and artificial languages are central to semiotics, it covers non-verbal signalling and extends to domains whose communicative dimension is perceived only unconsciously. Knowledge, meaning, intention and action are thus fundamental concepts in the semiotic investigation of phenomena.

2.2.3. PHENOMENOLOGICAL THEORY

Phenomenological theorists emphasize that each person actively constructs her or his own world. According to the Phenomenological approach to personality, the specific ways each person perceives and interprets the world make up personality and guide one's behaviour. People's view of reality/perspective is important in guiding their behaviour and is shaped by learned expectations. These expectations form personal constructs which are generalized ways of anticipating the world. Carl Roger's Self Theory emphasized self-actualization which he described as the innate tendency toward growth that motivates all human behaviour. Rogers distinguished between the actual self and the ideal self. Problems develop when the two self concepts do not match or when one's expectations or ideals don't match reality.

Abraham Maslow (Humanistic Psychology) believed that self-actualization is not just a human capacity but a human need. Maslow argued that there was a hierarchy of needs that all humans have, and beginning at the bottom of the hierarchy, each need in the hierarchy must be satisfied before one can move to the next level.

Evaluation of Phenomenological Theories reports that this is an optimistic approach that places faith in a person's ability to fulfil her/his ultimate capacities. Critics also view the Phenomenological approach as naive, romantic, and unrealistic. They are also critical of the lack of emphasis on the importance of inherited characteristics, biological processes, learning, situational influences, and unconscious motivation in shaping personality. Many Phenomenological concepts are too vague to be tested empirically.

2.2.4. CYBERNETIC THEORY

In 1948, Norbert Wiener coined the term "cybernetics" to elaborate on the existing theory of the transmission of messages by incorporating his idea that people send messages within a system in an effort to control their surrounding environment (Wiener, 1954). The basic function of communication, which Wiener defines in his theory as the processing of information, is to control the environment in which one lives. This idea suggests that the goal of human communication is to become familiarized with a certain environment while simultaneously influencing aspects of it. With this, Wiener asserts that, 'the purpose of Cybernetics to develop a language and techniques that enable us to attack the problem of control and communication in general and find the proper repertory of ideas and techniques to classify their particular manifestations under certain concepts' (Wiener, 1954, p.16). Thus, he defines the problem in terms of control and system malfunctions through the understanding of the Cybernetic theory. Wiener (1954) introduces the ideas of entropy and feedback into his theory (p. 20). A shortcoming is that Wiener's theory assumes people are built like complex machines and so, are capable of interpreting and processing feedback and making changes in order to fit in to an environment. Watzlawick et al. (1967) go beyond Wiener's theory of Cybernetics to explain why problems in human relationships are not easily influenced by feedback.

2.2.5. SOCIO-PSYCHOLOGICAL THEORY

Social Psychology is a branch of Psychology that studies individuals in the social context. It focuses on the individual and also relies on the scientific research to generate the theories of social behaviour. Social Psychology offers a considerable insight into the individual and society, and into the human condition. One of the major currents of theory in this area sprang from the work of philosopher and sociologist George Herbert Mead at the University of Chicago from 1894. Mead is credited as the founder of symbolic interactions. Social exchange theory emphasizes the idea that social action is the result of *personal choices* made in order to maximize benefits and minimize costs. A key component of this theory is the postulation of the *"comparison level of alternatives"*, which is the actor's sense of the best possible alternative (i.e., the choice with the highest benefits relative to costs). However, social exchange theories differ from economic theories by making predictions about the relationships between persons, and not just the evaluation of goods. Talcott Parsons, a sociologist at Harvard University developed a cybernetic theory of action which was adapted to small group research by Parsons' student and colleague, Robert Freed Bales, resulting in a body of observational studies of social interaction in groups using Bales' behaviour coding scheme, Interaction Process Analysis. During his 41-year tenure at Harvard, Bales mentored a distinguished group of sociological social psychologists concerned with group processes and other topics in sociological social psychology.

2.2.6. SOCIO-CULTURAL THEORY

Socio-cultural theory looks at the contributions that society makes to individual development. This theory stresses the interaction between developing people and the culture in which they live. Socio-cultural theory grew from the work of seminal psychologism. Lev Vygotsky, who believed that parents, caregivers, peers and the culture were largely responsible for the development of higher order functions. According to Vygotsky, "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter-psychological) and then inside the child (intra-

psychological). As his work became more widely published, his ideas have grown increasingly influential in areas including child development, cognitive psychology and education. Socio-cultural theory focuses not only on how adults and peers influence individual learning, but also on how cultural beliefs and attitudes impact how instruction and learning take place. An important concept in socio-cultural theory is known as the zone of proximal development. The zone of proximal development "is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." Essentially, it includes all of the knowledge and skills that a person cannot yet understand or perform on their own yet, but is capable of learning with guidance.

2.2.7. CRITICAL THEORY

Critical theory was first defined by Max Horkheimer of the Frankfurt School of Sociology in his 1937 essay *Traditional and Critical Theory*. Critical theory is a social theory oriented toward critiquing and changing society as a whole, in contrast to traditional theory oriented only to understanding or explaining it. Horkheimer wanted to distinguish critical theory as a radical, emancipatory form of Marxian theory. Critical theory questions and challenges the conviction that what is, or what is in the process of becoming, or what appears to be, or what is most commonly understood to be, or what is dominantly conveyed to be, is also at the same time right and true, good and just, and necessary and inevitable: critical theory does not, at least not automatically, accept any of this. Critical theory is always particularly concerned with inquiring into the problems and limitations, the mistakes, the contradictions and incoherence, the injustices and inequities in how human beings operate within particular kinds of structures and hierarchies of relations with each other, facilitated and regulated by particular kinds of institutions, engaged in particular kinds of processes and practices, have formed, reformed, and transformed ourselves, each other, and the communities, cultures, societies, and world in which we live.

In addition to the traditional theories outlined above, the two other major theories include: General System Theory and Information Theory.

Ludwig von Bertalanffy put forth the General System Theory as a way to determine the underlying rules governing all systems, regardless of their particular instantiation. If their behaviour is governed by the same principles, two systems are isomorphic. There are six main criticisms of System Theory. First, it is too general to be usefully applied to the real world since nearly anything (or everything together) can be said to be a system. Second, it is so open as to allow contradictory findings in different fields; it is not unifying. Third, it is just a perspective, since it doesn't adequately explain why systems do what they do. Fourth, it doesn't suggest new research. Fifth, it's not clear whether the theory models nature (in which case apparently dissimilar events are actually the same) or if it is only a conceptual model (in which case it is only a representation, and similarities do not actually exist in the world). Finally, some claim the world is not as complex as system theory purports it to be.

Inspired by developments in systems theory and cybernetics, in 1949 Shannon & Weaver formulated a new communication model that they called *Information Theory*. In information theory, information is viewed as a measure of the entropy or uncertainty in a system. In the information theory model of communication, a source produces a message to be transmitted via a channel to a receiver. Shannon and Weaver's information theory could also be seen as a system theory. Essentially, Shannon and Weaver's information theory reflects a cybernetic view of communication that is entirely focussed on "nodes" (speakers and hearers), which are connected only to each other and not with their contexts. In the information theory model, meaning is in the message; this message transmits from point to point in a linear fashion, self-regulated via feedback loops between source and receiver. This concept of meaning was taken to an extreme level of analysis by Osgood, who developed a mathematical model for finding where meaning is located. Osgood created the concept of "semantic spaces", which are effectively cognitive locations of meaning, and analyzed the relationships

between these spaces through a process of 'factor analysis' (Osgood, 1957). Significantly, the information theory regards the influence of contexts and environments on communication. It assumes that all communication travels from point to point, either from one source to one receiver, or from many sources to many receivers. Rather than being viewed as contextual influences, extraneous information is considered to be noise, which the receiver must filter out in order to discern the meaning of the message.

It is interesting note that there are a multiple set of theories and perspectives characterizing the field of communication studies. It is possible to use multiple theories to examine our communication. Theories allow us to organize and understand communication experiences, select communication behaviour to study, broaden our understanding of human communication, predict and control communication situations, challenge current social and cultural relationships, and offer new ways of thinking and living. It is important to recognize that no theoretical perspective is the right perspective, although most Communication scholars do favour particular theoretical approaches over others, and conduct communication research from their preferred perspectives.

3. COMMUNICATION MODELS

A communication model is chiefly a process in which information is enclosed in form of a package and is channeled then imparted by the sender to the receiver through a medium. When the receiver gets the information he or she decodes the message and gives the sender a certain feedback. Models of communication refer to the conceptual model used to explain the human communication process.

3.1. EVOLUTION
There are many models of communication developed by noted theorists of different disciplines. Among the theorists are: Aristotle, Lasswell, Shannon, Weaver, McLuhan, MacLean, Rileys, Westley, Gerbner, Rothstein, Schramn, Berlo, Osgood, Johnson, Cherry are the renowned ones. Some important and well-known contributions are highlighted below

Aristotle, a great philosopher was the first (300 B.C.) to develop a communication model called '*Aristotle's Model of Communication*'. This model is more focused on public speaking than interpersonal communication. Today, the Aristotelian model of communication is still widely used and accepted. In this model of communication, the sender sends the message to the receiver in an attempt to influence them to respond accordingly. The message has to be very impressive and convincing. Therefore, the sender must know and understand their audience well. In this model, the sender is an active participant and the receiver is passive. This concept is used in public speaking, seminars, and lectures.

Aristotle Model of Communication is formed with 3 basic elements

(i) Speaker, (ii) Speech, (iii) Audience
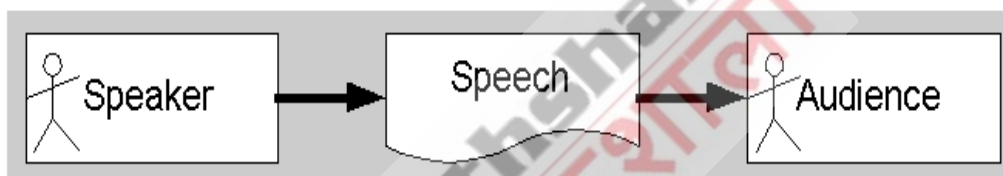
Figure 1 Aristotle's Model of communication

Aristotle advises speakers to build speech for different audience on different time (occasion) and for different effects. Speaker plays an important role in Public speaking. The speaker must prepare his speech and analysis audience needs before he enters into the stage. His words should influence in audience mind and persuade their thoughts towards him.

Harold Dwight Lasswell (1948), a political scientist and communication theorist, was a member of the Chicago school of sociology. In his work '*The Structure and Function of Communication in Society*' (1948) he defined communication process as *Who (says) What (to) Whom (in) What Channel (with) What Effect*. The distinct model he propounded was known as Dance Model.

The studies on information theory in 1949 by Claude Elwood Shannon, Warren Weaver and others, prompted research on new models of communication from

other scientific perspectives like Psychology and Sociology. Shannon and Weaver's information theory had a significant influence on the development of communication theories and models. These first studies on communication's models promoted more research on the subject. Shannon's model of communication marks, in important ways, the beginning of the modern field. It provided, for the first time, a general model of the communication process that could be treated as the common ground of such diverse disciplines as journalism, rhetoric, linguistics, and speech and hearing sciences. Theodore M Newcomb (University of Michigan), Wilbur Lang Schramm (1954), , Elihu Katz & Peter Lazarsfeld, and Berlo are the other major contributors. We will examine some of these models in greater details in a subsequent section. Other models, including a helical-spiral model developed by Frank Dance (1967), a circular model proposed by Lee Thayer (1968), and a "sawtooth" model advanced by Paul Watzlawick, Janet Beavin, and DonJackson (1967), emphasized the dynamic and evolutionary nature of the communication process rather than the components or the directions of influence. Barnlund (1970) proposed a transactional model of communication. The basic premise of the transactional model of communication is that individuals are simultaneously engaging in the sending and receiving of messages. Communication is viewed as a conduit in which information travels from one to another and the information is separate from the communication.

The evolution of communication theories and models leap from 1970 to 2003. In 1980s and 1990s, there was an increasing interest in *information* as an economic commodity. At the turn of the 21st century, Davis Foulger introduced his Ecological Model of Communication Process (EMPC, 2002 & Restructured in 2004) and DeVito (2003) introduced his interactive/interpersonal model of communication. The field of communication studies though has changed considerably over the years with the impact of technology.

3.2. Types
In this section, you will learn about three models of communication:

- Linear model
- Interactive model
- Transactional model

3.2.1 Linear Model

The linear model views communication as a one-way or linear process in which the speaker speaks and the listener listens. Laswell's (1948) model was based on the five questions below, which effectively describe how communication works:
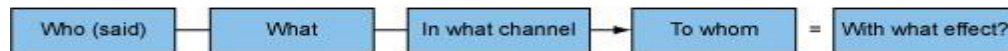
Shannon and Weaver's (1949) model includes noise or interference that distorts understanding between the speaker and the listener. Figure 2 shows a linear model of communication:
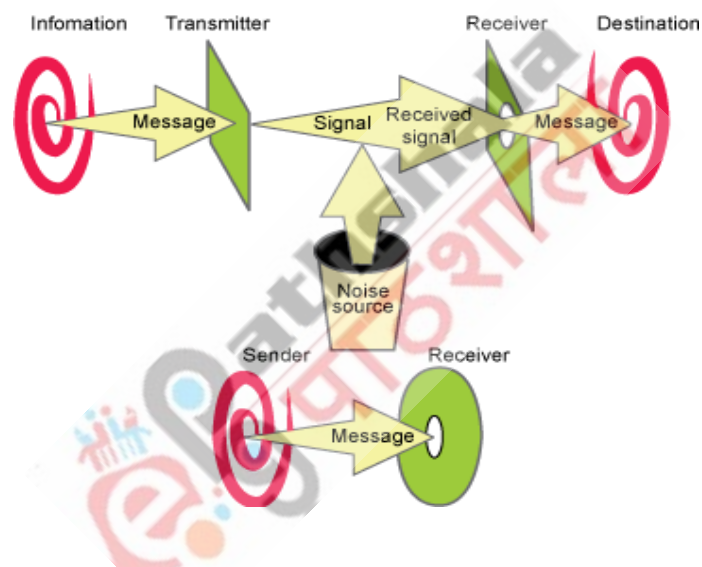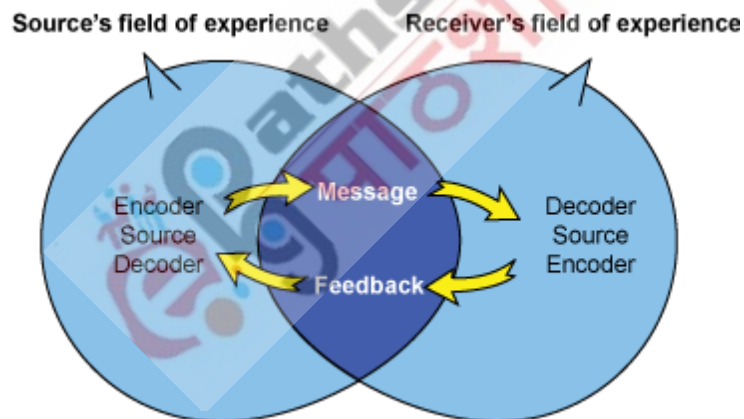

Figure 2 A Linear Model of Communication

Source: Wood, J. T. (2009). Communication in our lives (4th ed.). Belmont, CA: Thomson-Wadsworth

It is a one way model to communicate with others. It consists of the sender encoding a message and channelling it to the receiver in the presence of noise. Its major drawback is that it assumes that there is a clear cut beginning and end to communication. It also displays no feedback from the receiver; e.g. Mass communication - television, radio, newspapers. It is any method in which there is no possible way for feedback (even nonverbally). Letters, text messages, and e-

mail can be responded to. A lecture would not fit in this model because listeners can still give feedback nonverbally.

3.2.2 Interactive Model

The main flaw in the linear model is that it depicts communication as a one-way process where speakers only speak and never listen. It also implies that listeners listen and never speak or send messages. Schramm (1955) in Wood (2009) came out with an interactive model that saw the receiver or listener providing feedback to the sender or speaker. The speaker or sender of the message also listens to the feedback given by the receiver or listener. Both the speaker and the listener take turns to speak and listen to each other. Feedback is given either verbally or non-verbally, or in both ways. This model also indicates that the speaker and listener communicate better if they have common fields of experience, or fields which overlap (Figure 3):

Figure 3 An Interactive Model of Communication

Source: Wood, J. T. (2009). Communication in our lives (4th ed.). Belmont, CA: Thomson-Wadsworth

Effectively, this is two linear models stacked on top of each other. The sender channels a message to the receiver and the receiver then becomes the sender and channels a message to the original sender (feedback). This indicates that communication is a two way process. Feedback is not simultaneous, e.g., Instant

Messaging (IM). The sender sends an IM to the receiver, and then the original sender has to wait for the IM from the receiver to react.

3.2.3   Transactional Model

The main drawback in the interactive model is that it does not indicate that communicators can both send and receive messages simultaneously. This model also fails to show that communication is a dynamic process which changes over time. The transactional model shows that the elements in communication are interdependent. Each person in the communication act is both a speaker and a listener, and can be simultaneously sending and receiving messages. The model implies:

- *"Transactional"* means that communication is an ongoing and continuously changing process;

- In any transactional process, each element exists in relation to all the other elements. There is this interdependence where there can be no source without a receiver and no message without a source;

- Each person in the communication process reacts depending on factors such as their background, prior experiences, attitudes, cultural beliefs and self-esteem.

Figure 4 shows a transactional model of communication that takes into account "noise" in communication as well as the time factor. The outer lines of the model indicate that communication happens within systems that both communicators share (e.g., a common campus, hometown, and culture) or personal systems (e.g., family, religion, friends, etc). It also takes into account changes that happen in the communicators' fields of personal and common experiences. The model also labels each communicator as both sender as well as receiver simultaneously.
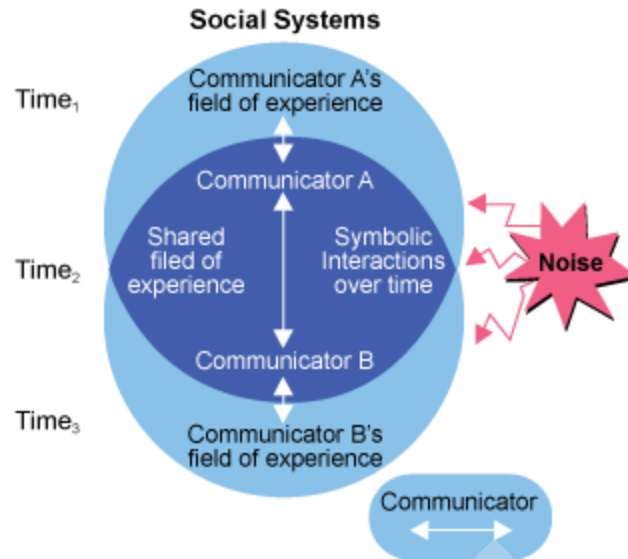
Figure 4 Transactional Model of Communication

Source: *Wood, J. T. (2009). Communication in our lives (4th ed.). Belmont, CA: Thomson-Wadsworth.*

This model assumes:

- That people are connected through communication;
- They are engaged in transaction.
- It recognizes that each of player is a sender-receiver, not just a sender or a receiver.
- It recognizes that communication affects all parties involved. .
- The transactional model also contains ellipses that symbolize the communication environment.

3.3. MODELS

It is vital to understand the communication models, so one can use them for enhancing effective communication. The composite ideas of Aristotle's rhetoric model and Freud's theory of psychology led to the development of a host of models from Shanon & Weaver (1949) to DeVito's model of communication (2013). Some of these are explained in the following paragraphs.

3.3.1. Harold Lasswell Model of Communication (1948)

The beginning of the theory of communication is considered to be Harold Lasswell's *The Structure and Function of Communication in Society*. He follows Aristotle's' rhetoric in his model adding channel/medium. Both view

communication as an 'object". Lasswell observed messages in the mass media and Aristotle observed Orators. Lasswell wrote in 1948 that "a convenient way to describe an act of communication is to answer the following questions." (Figure 5):

- **W**ho

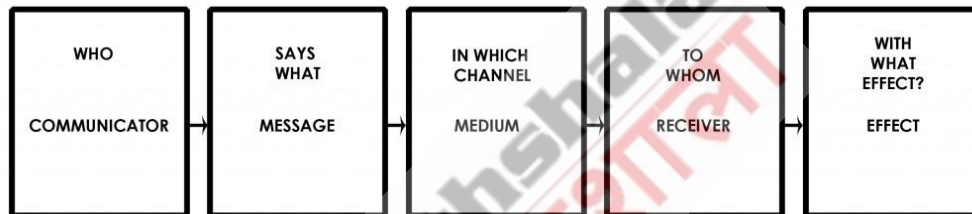- Says **W**hat

- In **W**hich Channel

- To **W**hom

- **W**ith **w**hat effect?

Figure 5 Lasswell Model of Communication

Lasswell's 5 Ws verbal model suggests the message flow in a multicultural society with multiple audiences. The flow of message is through various channels. Though this model is simple, it applies for almost all types of communication; the major drawbacks are: *feedback* and *noise* are not mentioned.

3.2.2. Shannon & Weaver Model of Communication (1949)

The first major model for communication came in 1949 by Claude Shannon and Warren Weaver of Bell Laboratories which laid the foundation for the different communication models. Following is a simple illustration (Figure 6) of this model.
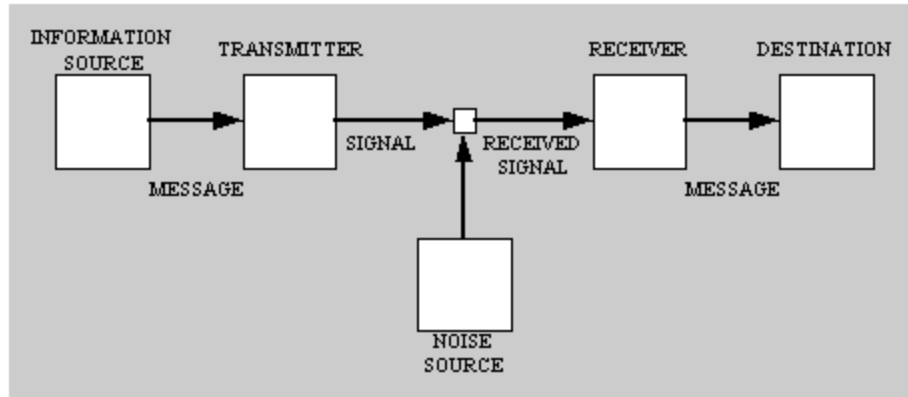
Figure 6 Shannon & Weaver's Model of Communication

The features of this model are:

- A linear process.
- A simple model (Technical)
- Content/message is easy to identify but hard to solve (Semantic)
- Source is dominant factor/decision maker (Impact/Effectiveness)
- Noise, a disturbing factor (Impact/Effectiveness)

Some suggest that Shannon's model isn't really a model of communication. It is incomplete and biased, as it models the flow of information through a medium, and is applicable to the system it maps, a telephone or telegraph, than to most other media. It suggests, for instance, a "push" model in which sources of information can inflict it on destinations. In the real world of media, destinations are more typically self-selecting "consumers" of information who have the ability to select the messages they are interested in, turn off messages that don't interest them, focus on one message in preference to others, and can choose to simply not pay attention. Shannon's model depicts transmission from a transmitter to a receiver as the primary activity of a medium. In the real world of media, messages are frequently stored for long periods of time and/or modified in some way before they are accessed by the "destination". The model suggests that communication within a medium is frequently direct and unidirectional, but in the real world of media, communication is almost never unidirectional and is often indirect.

3.3.2. THEODORE M NEWCOMB'S MODEL OF COMMUNICATION (1953)

Theodore M Newcomb of the University of Michigan in 1953 published "*An Approach to the Study of Communicative Acts*. His model adopts a different approach and sees the role of communication in a social relationship (society) and in maintaining social equilibrium within the social system. He does not include the message as a separate entity in his diagram, implying it only by use of directional arrows. He concentrates on the social purpose of communication suggesting that all communication is a means of sustaining relationships between people. Sometimes it's called as an "ABX" model of communication, as it works in a triangular format or A-B-X system (Figure 7).
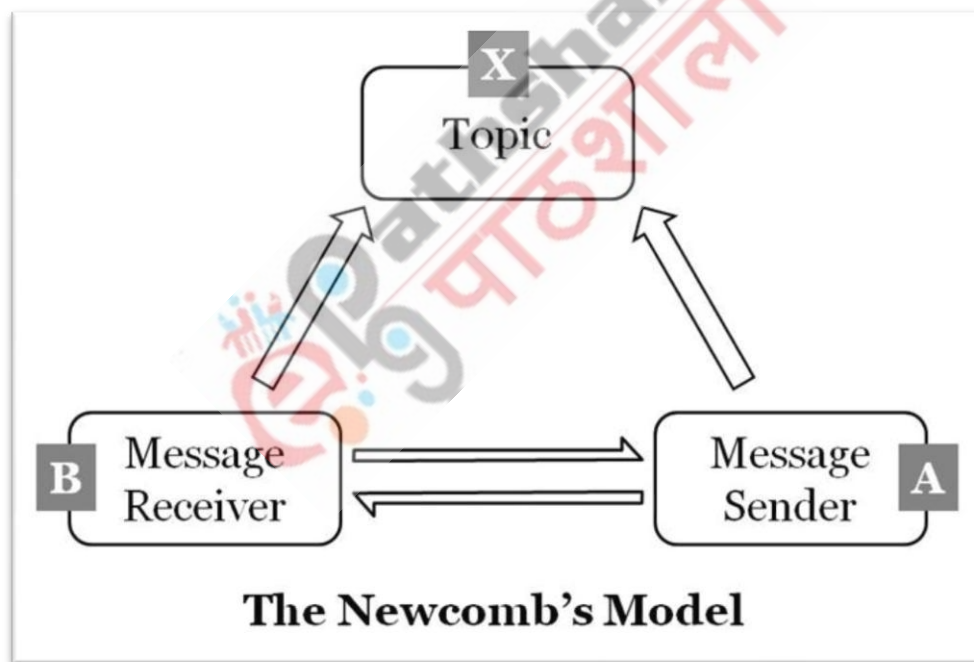

Figure 7 Newcomb's Model

3.3.3. Wilbur Schramm & Osgood Model of Communication (1954)

Osgood and Schramm's Circular Model of Communication (1954) was an attempt to rectify the earlier linear models of communication; it can happen within our self (Intra personal) or between two (Inter personal) each person acts as both

sender and receiver and hence use interpretation. It occurs simultaneously, e.g., encoding, interpreting and decoding. Wilbur Schramm stated that communication process does not start and end somewhere, but is endless. The Circular model depicts two actors who reciprocate in identical functions throughout: encoding, decoding, and interpreting. The model (Figure 8) presented by Osgood and Schramm shows not only the transmission and hearing of a message, but offers explanations in how it can be perceived and understood. The process of understanding what has been said can vary widely from person to person as there will always be a degree of semantic noise to be taken into account, such as cultural differences, background, socioeconomics, education and values.
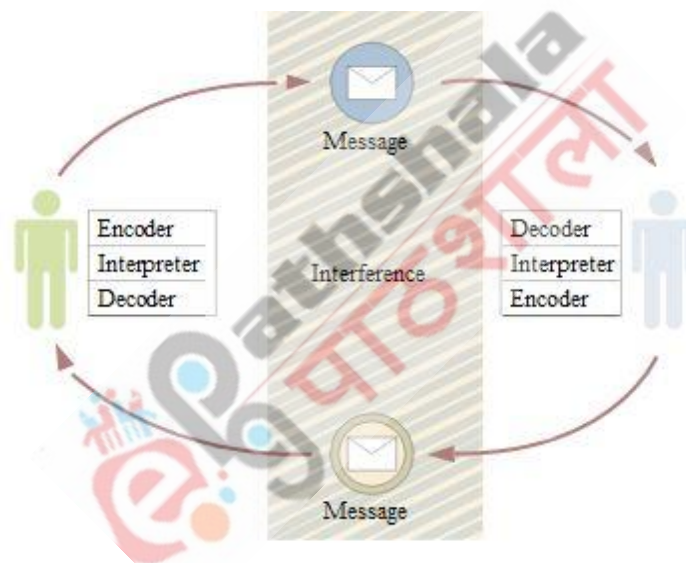

Figure 8 Schramm's Model of Communication

The merits of the model are that it is dynamic, includes redundancy, sender and receiver are the same persons, feedback is integral part of the process and so suggests communication to be circular in nature. The chief demerit is that it does not talk about semantic noise and it assumes the moment of encoding and decoding.

3.3.4. George Gerbner Model of Communication (1956)

George Gerbner, a Professor at the Annenberg School of Communications in the University of Pennsylvania, is one of the pioneers in the field of communication

research. In 1956, Gerbner attempted a general purpose of communication model (Figure 9). He stressed the dynamic nature of communication in his work and also the factor affecting the reliability of communication.
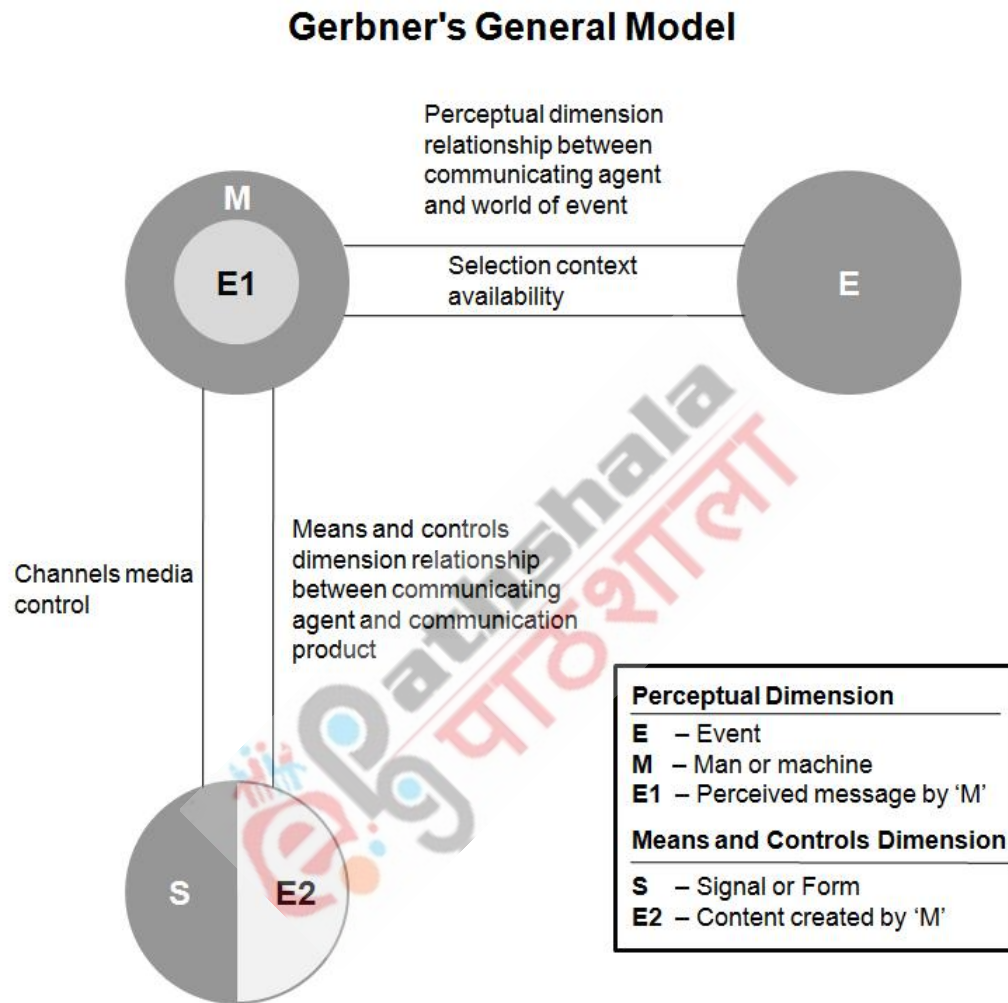
(*Note: This model can be best understood when read along with the diagram beginning at E – Event.*)

Figure 9 Gerbner's Model

(i) Perceptual Dimension:

'E' is a real life event and the event content or message is perceived by 'M' (Man or a Machine). The perceived message from "E" by "M" is "E1". E1 is not same as 'E'. Because any man or machine cannot perceive the whole event and they

perceive only a part of the event (E1). This is known as "Perceptual Dimension". The 3 factors involved between 'E' and 'M' are: Selection, Context, and Availability.

As M (man or machine) cannot perceive the entire content of the event "E", M **selects** the interesting or needed content from the entire event after filtering the others. The **context** occurs in the event and **Availability** is based on 'M's attitude, mood, culture and personality, e.g., a journalist perceives messages from an event and cannot focus on the whole event; so they filter the unwanted content from the event. This filtered content is not the same as the actual event content because the journalist edits the content based on his attitude, mood and cultural background or press policies.

(ii) Means and Controls dimension:

E2 is the event content which is drawn by M. Here, M becomes the source of a message about the event E to send it to someone else. M creates a statement or signals about the message and Gerbner termed its Form and content as "SE2". (S-Signal or Form it takes and E2 is the extracted content). Here, Content (E2) is structured or formed (S) by 'M' and it can communicate in different ways or based on the structured ways. M has to use channels (or media) to send the message over which he has greater or lesser degree of control. The question of 'control' relates to M's degree of skill in using communication channels. If using a verbal channel, how good is he at using words? If using the Internet, how good is he at using new technology and words? This process can be extended to infinitum by adding on other receivers (M2, M3etc.) who have different perceptions (SE3, SE4 etc.) of the event.

For instance, in case of news reporting, E can be any event that has happened and the reporter (M) selects a particular part of the event (E1) that may provide his channel higher ratings or the news may boost the particular party which his channel supports. This SE2 is sent through a medium to a mass audience. Then one or more members of the audience (M1) may distribute the message (SE2) and to their friends with their interpretation and the process continues.

3.3.5. Westley & Maclean's Model (1957)

Westley and MacLean realized that communication does not begin when one person starts talking, but rather when a person responds selectively to his/her physical surroundings. This model considers a strong relation between surroundings and the process of communication (Figure 10). Communication begins only when a person receives message from surroundings.
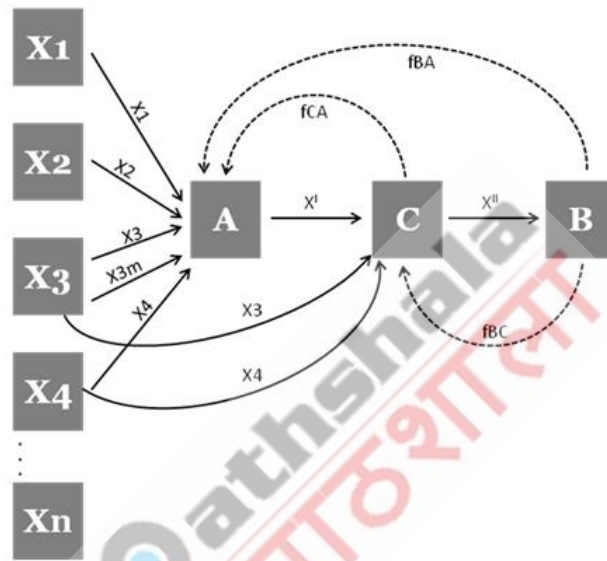

Figure 10 Westley and MacLean's Model

X1, X2, X3 ... .. Xn are news, articles or information; Feedback (f); Clients (A); Reader or Audience (B); and Gate Keeper (C). Feedback Loop between Reader (B) and News Paper (C) – fBC; Feedback Loop between News Paper(C) and Client (A)- fCA; and Feedback loop between Reader (B) and Client (A)- fBA.

The merits of this model include:

- It accounts for Feedback;

- It can account for both interpersonal communication and Mass communication;

- It is a predictive model of communication and also very descriptive;

- It also accounts for non-binary interactions; this means that the model is good even for communications involving more than two sources;

However, it is a two dimensional model; this means that the model will not be applicable for typical communication events that involve broader context and wide range of communication messages.

3.3.6. David Berlo Model of Communication (1960)

Another famous communication model is Berlo's model. In this model, he stresses on the relationship between the person sending the message and the receiver. According to this model, for the message to be properly encoded and decoded, the communication skills of both the source and the receiver should be good. The communication will be at its best only if the two are skilled. Berlo's SMCR model has four main components and each component has its own sub components(Figure 11).
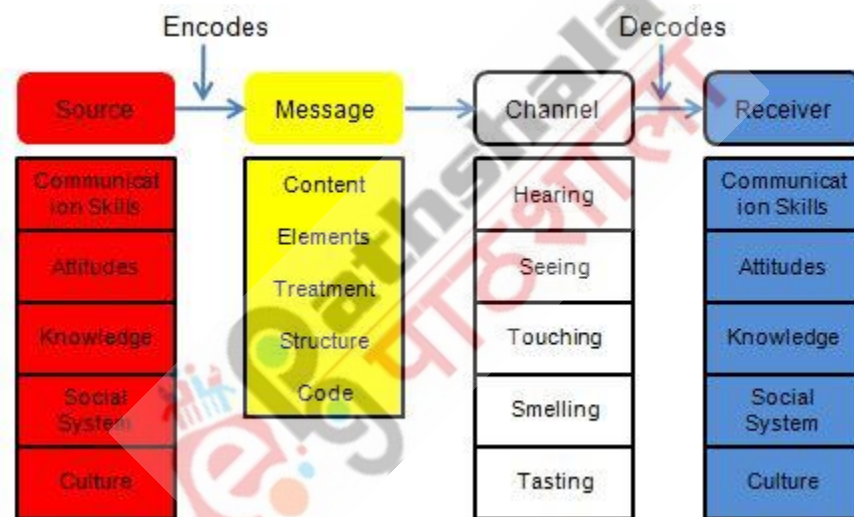

Figure 11 Berlo's Model

Berlo's model lists a number of factors under each of the elements:

♦ **SOURCE**: The source is where the message originates

   ♦ **Communication skills** – It is the individual's skill to communicate (ability to read, write, speak, listen etc…)

   ♦ **Attitudes – The attitude towards the audience, subject and towards oneself for e.g. for the student the attitude is to learn more and for teachers wants to help teach.**

- ♦ **Knowledge - The knowledge about the subject one is going to communicate for e.g. whatever the teacher communicates in the class about the subject so having knowledge in what you are communicating.**

- ♦ **Social system – The Social system includes the various aspects in society like values, beliefs, culture, religion and general understanding of society. It is where the communication takes place.**

- ♦ **Culture - Culture of a given society also comes under social system.**

- ♦ **Encoder - The sender of the message (message originates) is referred as encoder, so the source is encoding the message here.**

♦ **MESSAGE is the subject matter under transfer.**

- ♦ **Content – A message comprises of its content. Content is accompanied by some elements.**

- ♦ **Elements – It includes various things like language, gestures, body language etc, so these are all the elements of the particular message.**

- ♦ **Treatment – It refers to the packing of the message. The way in which the message is conveyed or the way in which the message is passed on or deliver it.**

- ♦ **Structure - The structure of the message how it is arranged/sequenced.**

- ♦ **Code- The code of the message means how it is sent and in what form; it could be e.g. language, body language, gestures, music and even culture is a code. Through this you get/give the message or through which the communication takes place or being reached.**

♦ **CHANNEL** -   It refers to the five senses which are as follows:

- ♦ **Hearing**
- ♦ **Seeing**
- ♦ **Touching**
- ♦ **Smelling**
- ♦ **Tasting**

Despite not mentioning a medium we need to assume that as communication is taking place channels can be any of the five senses or a combination.

♦ **4. RECEIVER**: The receiver needs to have all the features of the source a**nd he is referred to as a decoder, w**ho receives the message and decodes it.

This model suggests that for an effective communication to take place the source and the receiver should be similar and need to be on the same level. E.g. If communication skills on source side are good then the receiver should have equally good listening skills.

The major criticisms of Berlo's SMCR model of communication are:

♦ Lacks feedback;

♦ No mention of barriers to communication like Noise;

♦ Complex model;

♦ Linear model;

♦ Needs people to be on same level for communication to occur but that may not be true in real life situations;

♦ Main drawback of the model is that the model omits the usage of sixth sense as a channel which is actually a gift to the human beings (thinking, understanding, analyzing etc).

3.3.6. Dance's Helix Model (1967)

Another very important model of communication is the Helical Model of communication, proposed by Frank Dance in 1967 (Figure 12). Helix is a three-dimensional object with a shape like that of a smooth curve that goes upwards as also comes downwards.
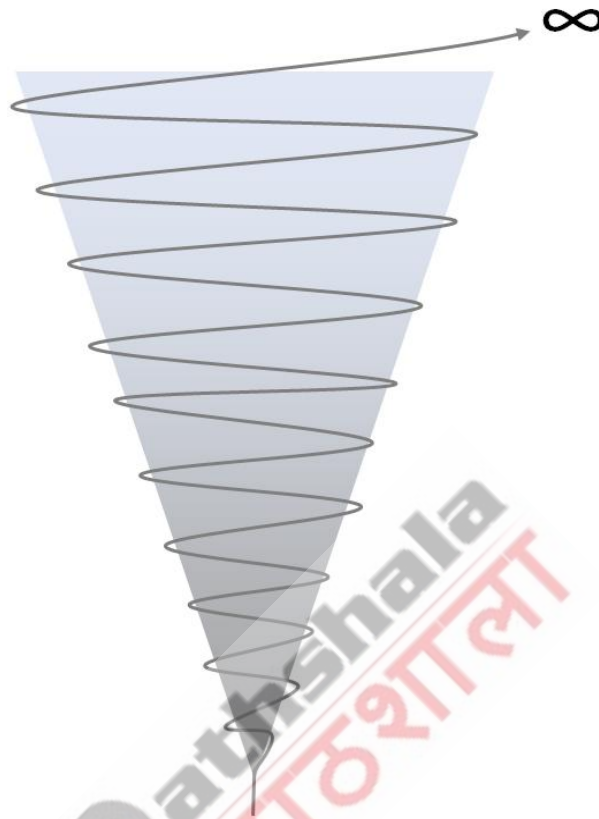
Helical Model of Communication

Figure 12 Helical Model of Communication

Frank Dance explains the communication process based on this Helix structure, the bottom or starting is very small then it gradually moves upward in a back and forth circular motion forming bigger circles in the top. The whole process takes some time to reach. Just as a helix, the communication process starts very slowly (defined by a small circle). Communicators share only small portions information and this gradually develops into next level expanding its boundaries; but this will take some time. Later the communicators commit more and share more information. Frank Dance included the concept of time in his theory. Something happens over time and the subsequent events will be based on the first event. This theory of communication was the subject of a number of experiments. Even

though this model of communication clarifies everything there is the problem of over simplification.

3.3.7. DeVito's Interactive Model (2003)

DeVito's model is derived from the 'information processing' models of the 1960s and differs from the earlier rhetorical model by amplification, adding to its linear predecessor feedback, medium and noise.
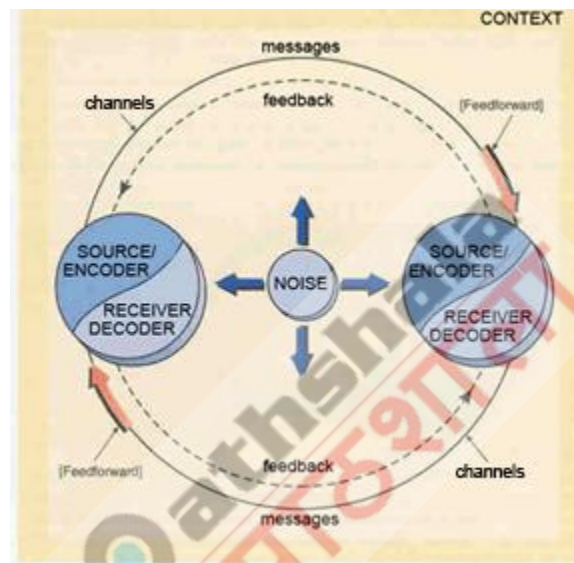

Figure 13 DeVito's Model

This model has 8 components: Sender, Receiver, Message, Channel, Coder (encoder & Decoder), Context, Feedback and Noise (Figure 13).

3.3.8. Davis Foulger (2004)

Foulger introduced his Ecological model in 2002 and restructured it in 2004. This model is, in many ways, a more detailed elaboration of Lasswell's classic outline of the study of communication. The fundamental statements of relationship establish a series of general relationships between people, messages, language, media, and the communication they enable. The relationships are summarized, in somewhat greater detail than these propositions suggest, in Figure 14. In this figure, communication between people (creators and consumers) is mediated by three constructs, with language used to build messages within media. The model graphically depicts all of the propositions described above. Specifically it depicts

people communicating (Definition of Communication) through the mediation (Proposition 1) of messages (Proposition 4) that are created and consumed (Proposition 3) using language within media (propositions 2, 5, and 4.1). Languages and media are depicted as being both learned (proposition 6) and created (proposition 7). Ten relationships are summarized in the figure. While some of these are described above, several derivative relationships are yet to be described, and some of the relationships need to be seen in greater detail. It asserts that communication occurs at the intersection of four fundamental constructs: communication between people (creators and consumers) is mediated by messages which are created using language within media; consumed from media and interpreted using language.
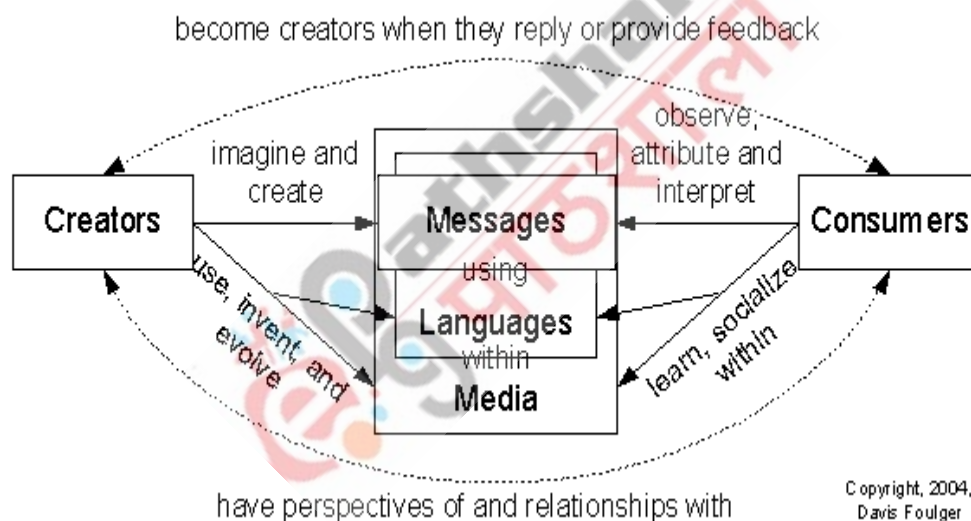

Figure 14 Davis Foulger's Model

4. Summary

This module is in two parts. Part 1 traces the evolution of communication theories and the outlines of the major theories of communication. Part 2 describes the different communication models and explains the major models of communication. One needs to keep in mind that the complexities that accompany the communication models may only make understanding the communication much harder. Models are a fundamental building block of theory. They are also a

fundamental tool of instruction. Shannon's information theory model, Weiner's Cybernetic model, and Katz' two step flow have each allowed scholars to decompose the process of communication into discrete structural elements. Each provides the basis for considerable bodies of communication theory and research. Each model also provides teachers with a powerful pedagogical tool for teaching students to understand that communication is a complex process in which many things can, and frequently do, go wrong; for teaching students the ways in which they can perfect different skills at different points in the communication process to become more effective communicators.

5. Discussion Questions

5.1. How does the concept of communication contribute to personal and social development?

5.2. What are the components of communication any standard model would reflect?

5.3. Trace the evolution of major theories of communication.

5.4. What and how do you focus on the traditional theories of communication?

5.5. Distinguish between a linear model from that of an interactive model of communication.

5.6. Critically examine the relevance of feedback in a communication process.

6. Key Concepts

- Audience;
- Channel
- Content
- Context
- Critical
- Cybernetics
- Decoder
- Destination
- Encoder
- Entropy
- Feedback
- General Systems theory

- Helix
- Interactive model
- Interpersonal
- Interpreter
- Linear model
- Mass media
- Media/medium
- Message
- Model
- Noise
- Phenomenological
- Receiver
- Redundancy
- Rhetorical
- Semiotic
- Sender
- Socio-cultural
- Socio-Psychological
- Source
- Theory
- Transactional model
- Transmitter

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