RE-EVALUATION OF COMMUNICATION CONCEPT IN THE ERA OF COMMUNICATIVE ARTIFICIAL INTELLIGENCE

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ABSTRACT

This paper interrogated the deconstruction of Communication by the invention of Artificial Intelligence which has culminated in machine playing the role of a communicator in a communication process. The paper scrutinized some of the classical definitions of communication and argued that given their anthropogenic bents, they have become archaic and consequently irrelevant and incorrect in the present communication milieu. Gerbner's Model of Communication (1956) was used to provide theoretical support for the discourse. The paper advocated convocation of intellectual and academic conferences for communication, media and journalism scholars from across the globe to brainstorm on a new and acceptable definition of communication to reflect the new role of technology in the 21st century communication ecosystem. It also recommended revision of all existing literature in the field of study to accommodate the new definitions of communication that will emanate from such discourses in the interest of learning and scholarship.

Keywords: Artificial Intelligence, Communicative Artificial Intelligence, Communication, Communication Model, Technology.

INTRODUCTION

Technological advancement is not only diametrically changing communication landscape but is also changing the concept of communication itself. The emergence of Artificial Intelligence (AI), especially Communicative Artificial Intelligence has brought about a situation whereby machines have assumed the role of communicators in almost every sense of the word.

At the early stages in the history of communication, it is doubtful whether anybody ever envisaged that what is ordinarily, deemed to be a human only activity like communication, could be undertaken by non-human like a robot. Consequently, all the classical definitions of the concept, communication, were centred on humans, while technology served merely as a medium (Peters, 1999).

In the same vein, the models and theories of communication did not consider the role of technology as a communicator in the communication process. Rogers (1997) observed that early models of communication assigned the role of communicator to human while technology served as the medium. McLuhan's (1964, p.23) famous metaphor that the medium is the message succeeded in giving added status to the medium or technology. The medium being the message as the scholar insinuated, did not suggest that the medium is the communicator nonetheless.

The invention of communicative AI changed the perception and definition of the concept of

communication a great deal. Gunkel (2012a) opined that AI poses a research challenge to communication scholars as it has caused the blurring of the ontological divide between human and machine. It is axiomatic to state that in the contemporary communication scenario, the human communicator at one end could be interacting with a communicatee (recipient) who (which) is not a human. One could therefore be asked who one is communicating with or what one is communicating with and it should be taken as new normal in the communication ecosystem.

In view of the emergence of Communicative AI, one could begin to wonder whether the existing anthropogenic definitions and models of communication still stand the test of time or whether there is crying need to redefine the definition or reconstruct the models with a view to accommodating the new role of technology.

CONCEPTUAL AND DEFINITIONAL OVERVIEW
What is Communication?

From the outset, it is pertinent to note that the concept of communication has up until the present age defied a known correct or generally acceptable definition. Like the proverbial elephant, which was described depending on the part of the animal the blind men touched, Communication has been defined differently by scholars. In the words of Fiske (1990, p.1) "Communication is one of those human activities that everyone recognises but few can define satisfactorily."

Etymologically, Communication is derived from the Latin noun "Communis" and the Latin verb "Communicare" which means "Common" and to "make Common" respectively (Hasan, 2013, p.2, Nwosu, 1996, p.2). To fully grasp the concept of communication and to drive home the points mooted in this discourse, there is need to wade through a maze of classical definitions.

Hornby (2015, pp.303&304) defined communication as the activity or process of expressing ideas and feelings or of giving people information. Schramm (1977, p.15) defined communication as "the sharing of an orientation towards a set of informational signs" For Hovland, Janis and Kelley (1953), it is "the process by which an individual (the communicator) transmits stimuli (usually verbal symbols) to modify the behaviour of other individuals (the communicatee).

Laswell (1948) gave one of the simplest definitions of communication by stating that it is "Who said what, through what channel, to whom, and with what result?" Charles Cooley cited by Schramm (1977, p.13) gave a definition of communication to mean, "the mechanisms through which human relations exist and develop – all the symbols of the mind, together with the means of conveying them through space and preserving them in time."

Fiske (1990, p.1) defined communication as "social interaction by means of messages." On their part, Mowlana and Wilson (1988, p.9) further expanded Fiske's definition by stating that "it is a social interaction by means of messages, which are both human and technological."

Okunna and Omenugha (2012) defined communication as the exchange of information, belief, ideas, opinions or experiences between people." Wayne (2009) cited by Anyanwu (2015 p.203) in analyzing definitions of communication asserted that the term communication has been defined from two different schools of thought namely the semiotic school and the process school. The semiotic school defined communication as the production and exchange of meanings emphasising the importance of socio-cultural context in facilitating interaction between messages or texts and their receivers in order to produce meanings. On the other hand, the process school defined communication as the mechanical transmission of messages from senders to receivers.

As has been stated in this paper, there are plethora of definitions of communication but the ones given above should suffice for the purpose and context of this discourse. Although the definitions are various and varied, one thread that runs through all of them is that communication is a process of sharing of messages. Such message must be between two or more people who have some level of similarities or commonness.

The commonness amongst communicators that makes for a successful communication can be that the people are from the same ethnic group, share common language, practice common

religion, share common educational attainments and so on and so forth.

A cursory look at the selected definitions will also reveal that while some scholars omitted the role of the medium or channel of communication in the entire process, some others emphasised the invaluable role of medium or technology. Suchman (2009) posited that whereas communication is a social process, technology plays an active role as part of the social process.

Interactions amongst people made possible by communication, fosters good relationships among the people involved and makes for a peaceful and harmonious existence in a given society. The bottom line, therefore, is that communication is conceived, perceived and understood as a human only activity as the definitions have depicted.

It is instructive to note also that communication, no matter the type or genre, details of which are not necessary here, invariably achieves certain goals. This is why a communication process is said not to be complete or successful if the feedback is absent. The feedback component completes a communication process.

Communicative Artificial Intelligence: An Insight

A brief explication on AI is pertinent in order to fully comprehend what communicative AI means. Gunkel (2012, p.10) asserted that "the fundamental decision concerning the role and function of the computer has been supported and institutionalised by the relatively new sub-field of computer-mediated communication''Straders (2019) defined Artificial Intelligence as the making of intelligent computerised machines that are programmed to closely imitate human thoughts and actions for the purpose of analysing data to address variety of problems and execute tasks.

Guzman and Lewis (2020) explained that Artificial Intelligence is technology designed to perform specific tasks associated with humans. Prior to this technological feat, intelligence was the attribute reserved for human beings. As the name explicitly suggests, artificial intelligence is the simulation of human intelligence in machines which the designers programme to perform tasks which require human intelligence to accomplish. Danso et al. (2023) stated that

the term AI implies effort to understand human intelligence by recreating a mind within a machine and developing technologies to perform tasks associated with some level of human intelligence.

In recognition of amazing exploits and significance of Artificial Intelligence, Casey (2019) stated no one can correctly predict where it is headed. True to the scholar's observation, communicative artificial intelligence has evolved. Communicative AI are machines that are technologically designed and equipped to engage in communication just as humans do. It stands to reason, thanks to technological innovation, that technology advanced from facilitating communication as a medium or channel to becoming a communicator itself.

Allen (2003) expatiated that Communicative Artificial Intelligence was made possible due to advancement in two Artificial Intelligence subfields namely Natural Language Processing (NLP) and Natural Language Generation (NLG). The two departments successfully achieved the processing of human communication well enough to enable machines to make sense of messages presented in human language, rather than machine language, and creating messages in human languages.

As a consequence of the birth of communicative AI, what looked like impossibility centuries ago becomes a reality in the present age. Machines or robots share communication abilities and roles with humans. Technology becomes a subject as against its original role as something through which people communicate. Communicative Artificial Intelligence includes but not limited to conversation agents, social robots and automated writing software.

The role which Communicative AI plays in communication process and the mode of communication it carries out are contingent on the technological equipment of the machine and mode of communication. Take for instance, voice-based assistants are imbued with the technological capability to respond to human questions and requests. Embodied robots interact verbally and nonverbally with people (Peter &Kyhne, 2018). Bots, which are automated programmes, enter into text-based social media interactions by posing as human

conversational partners, influencing the tone and substance of the exchanges (Ferrara et al, 2016). News-writing programmes, develop narrative from raw data that appear alongside human-produced stories and cannot be easily distinguished from them (Clerwall, 2014).

What it means in essence is that communicative AI is designed to have the capacity of understanding the words humans utter to it as well as to extract meaning out of such words, form appropriate answer or response to the words and respond in that way to the human communicator.

It is a trite to assert that for the mere fact that a machine can communicate like humans does not make it have any verisimilitude with human-like intelligence and understanding. Within the context of communication however, message exchange between AI as a communicator and humans has been considered by some scholars as being analogous to interpersonal (human) communication (Waddell et al, 2016).

THEORETICAL SUPPORT

The model of communication which we deemed apposite for this paper is Gerbner's Model of Communication (1956).
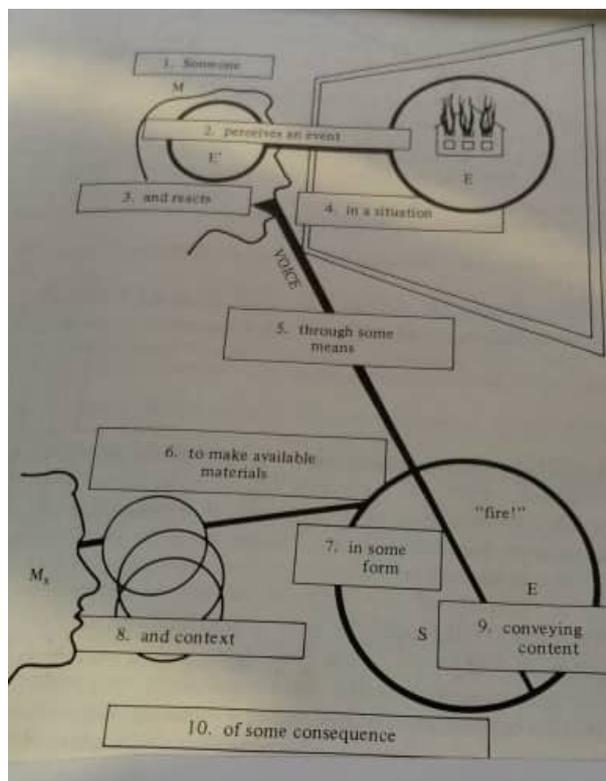
Gerbner's Model of Communication (1956)

This model of communication was developed by George Gerbner in 1956. The communication modelemphasises the dynamic nature of human communication and the factors that influence communication. It also stresses the significance of channel in a communication process (Janse, 2021).

Severin and Tankard (1992) described Gerbner's model of communication as an elaboration on Lasswell's model as it provided a verbal model that emphasises ten basic aspects in a communication process. The ten aspects "represent shift in emphasis only, rather than tight compartments for the study of communication" (p. 51).

The model was premised on verbal aspect of communication wherein someone observes an event and sends his or her perception of the event to someone else. It consists of a schematic model whereby a message is perceived by somebody who sends messages to the sender.

Gerbner's model highlighted two different dimensions of communication labelled the perceptual dimension and the means and control dimension. In the perceptual dimension, an event or situation in life is perceived by someone. The event which is so perceived is interpreted within the context of the person's personality, mood, attitude, culture and many other factors.

The model depicts three factors which are considered significant in the perceptual dimension. These are selection, context and availability. Of the three variables, selection is of prime importance because it is the information or situation that the person selects that he or she digests or analyses within his or her context and subsequently sends to the other person. Whatever message, event or issue the perceiver of the message ignores or blocks does not matter or happen.

In the second dimension, which is the means and control, somebody creates an event and in this instance becomes the source. That person, who is the source can send the message about the event to someone. This is done after the source must have created statements and signal about the event. The source solely determines the resources and channel for the message. In summation, what the model demonstrates in essence, is that communication is a very

sensitive and vulnerable process because it involves people.

Gerbner's Model of Community is apt and also relevant to this discourse because it not only epitomizes other models of communication but essentially accentuates the centrality of human in the communication process as virtually all existing definitions of communication depict.

How Communicative Artificial Intelligence Deconstructs Communication

The import of starting this discourse with definitions of communication is to establish that all the definitions of communication centre of human beings. The definitions implicitly and explicitly show that it is a human activity. By no stretch of the scholars' imaginations did the scholars who defined communication envisage that the role of human could be usurped by technology as is witnessed today. This explains why Peters (1999) posited that the definitions of communication are predicated on a larger cultural conceptualisation as a uniquely human trait.

Similarly, the selected communication model is emphatic on human as the sole communicator in any communication process as technology was consigned to the role of a medium. It is noteworthy to apprise our audience that Gerbner's Model was chosen because it was the latest model developed as improvement over the models that anticipated it. Some of such models that preceded Gerbners' own are Lasswell (1948), Osgood (1954), Schramm (1954), and Newcomb (1953). Like Gerbner, none of the models factored technology as communicator.

The models of communication in assigning humans the role of communicator and relegating technology to the role of the medium took cognizance of the perception and definitions of communication as a human only function. The emergence of Communicative Artificial Intelligence causes a change in the communicator-medium dialectic resulting in technology becoming a communicator. Reeves (2016) opined that Artificial Intelligence more than facilitates communication, it automates communication. Gehl and Bakardjieva (2017) also added that Artificial Intelligence also automates the social processes dependent upon communication.

That Artificial Intelligence has taken the role of a communicator in a communication process is a well-established fact. It is a reality that has come to stay in the present communication paradigm. What is however the grey area is its concomitant destabilizing impact on the seemingly well-established knowledge vis-à-vis the concept of communication.

Given the classical definitions of communication as have been show-cased in this paper, all of which were given anthropogenic bent, how can we define communication to accommodate the role played by machine as a communicator? In other words, are the existing definitions of the concept of communication still relevant or have they been rendered otiose or anachronistic?

Bittner (1989, p.17) exhibited some traits of prescience when he enthused decades ago that "new technologies may revolutionalise our use of media and further alter the definition of Mass communication. Lievrouw (2009) also advocated a renegotiation of the existing definitions and boundaries between types of communication following the technological advancement.

Indeed, AI has given a new and added task for communication scholars. If communication in today's world can be said to take place between humans and machines in the same way and manner that it takes place between humans, the resultant definitional conundrum needs to be scholarly and urgently resolved. How correct will it be, for instance, for a communication scholar to still teach students in the various institutions of higher learning that communication is a process of message exchange between a person and another? Or, if a student gives as an answer to a communication professor that communication is a process whereby a human or a machine conveys messages through a channel to a human communicatee, will the answer be deemed correct or wrong?

If we are to make our own contribution to the issue of definition of communication, we can only proffer one by succinctly stating that Communication is a process whereby a human or a machine interacts with another human or a machine. Concise as this definition is, it may not be comprehensive as to what communication is. None has actually been superb in the past. Taking cognizance of the

fact that a Google search for the concept of communication can reveal more than four thousand definitions, it is our earnest hope that this paper will provoke many definitions of communication to reflect the changing time, contexts and advancement in technology.

Thus, existing books on Communication or Mass Communication need to, as a matter of urgency and in the interest of learning, undergo revision to accommodate artificial intelligence which is now a communicator.

Conclusion/Recommendations
This paper has, in the estimate of the authors, done a full cycle. We have established that communication has defied a unanimously acceptable definition by scholars of the field of study. The age-long definitional conundrum has, in the recent time, been exacerbated by advancement in technology particularly the advent of artificial intelligence.

While Artificial Intelligence has been the buzz words in many domestic and international fora, it is doubtful whether the outcome of such intellectual engagements has provoked a rethink among scholars and students in the academia and the media world as regards what communication is in the 21st century. What rather obtains is a situation where the archaic or classical definitions of the concept have continued to be recycled, distilled, or paraphrased and imparted to students in institutions of learning.

Granted that copious literature on Communication exist all over the world, such books have not undergone a revision to reflect the deconstruction and redefinition caused by artificial intelligence on the meaning and perception of Communication.

Whether such definitions in the books as given by world acclaimed scholars of the old and new are still relevant, correct and acceptable today in the era of artificial intelligence is a matter for conjecture. Whatever stance one takes on the issue, what is clear is that a definitional perplexity exists and needs to be resolved in the interest of learning and scholarship.

It has become imperative to convoke a conference of selected Communication, Media and Journalism Scholars from across the globe to brainstorm on new definition of communication taking into cognizance the role of artificial intelligence as a communicator in the communication process.

When new and acceptable definition or definitions of the concept is (are) adopted, it becomes a no brainer to suggest that all existing literature that hinged the definition of the concept on human must, pronto, undergo necessary reviews in obeisance to dynamic nature of Communication occasioned by changing technology.

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