


Open Access Article

 <https://doi.org/10.55463/hkjs.issn.1021-3619.61.52>

Communication Models: Tools for Understanding Conflicts in Global Digital Communication

Obianuju Okafor

School of Media and Communication, Pan-Atlantic University, Lekki, Lagos State, Nigeria

Received: May 26, 2023 ▪ Reviewed: June 18, 2023

▪ Accepted: July 15, 2023 ▪ Published: August 10, 2023

Abstract:

Communication models have historically been used by communication scholars and professionals to capture and understand the intricacies of the communication process. In the current digitalized and globalized communication environment, communication models can still be seen as valuable tools, but as communication technology enjoys various evolutions, some recalibration and reconceptualization is required to effectively explain and use communication models. A considerable number of studies have focused on digitalization and its effects on the communication process. By reviewing communication models in light of digital global communication, this study aims to appraise the continued relevance of communication models and recommend new perspectives for their use. This paper reviews four classic communication models in view of recent evolutions in communication technology that enable digital global communication. The paper also considers the interplay of culture and digitization on the communication process, and the models reviewed are selected on the basis of how they fit into the evolving realities of this moment, contributing to the understanding of human communication from intra and interpersonal communication to mass communication and organizational communication. The results help to close context gaps between classic communication models and the communication environment in a digitally connected globalized world, excavating the relevant portions of classic models while suggesting areas that require new perspectives. The study also utilizes communication models to suggest bridges for conflict scenarios that are brought about by the communication environment of the day.

Keywords: communication models, communication technology, global communication, culture.

通信模型：理解全球数字通信冲突的工具

摘要：

传播模型历来被传播学者和专业人士用来捕捉和理解传播过程的复杂性。在当前数字化和全球化的通信环境中，通信模型仍然可以被视为有价值的工具，但随着通信技术的不断发展，需要进行一些重新校准和重新概念化才能有效地解释和使用通信模型。相当多的研究都集中在数字化及其对通信过程的影响。通过根

据数字全球通信回顾通信模型，本研究旨在评估通信模型的持续相关性并为其使用推荐新的视角。本文鉴于支持数字全球通信的通信技术的最新发展，回顾了四种经典的通信模型。本文还考虑了文化和数字化在传播过程中的相互作用，并根据它们如何适应当前不断变化的现实来选择所审查的模型，有助于理解人类传播从内部和人际传播到大众传播 沟通和组织沟通。研究结果有助于弥合经典通信模型与数字互联全球化世界中的通信环境之间的背景差距，挖掘经典模型的相关部分，同时提出需要新视角的领域。该研究还利用沟通模型为当今沟通环境带来的冲突场景提供桥梁。

关键词：传播模式、传播技术、全球传播、文化。

1. Introduction

Communication models help scholars and communication professionals to abstract and simplify the communication process by identifying elements and general concepts around a communication encounter. Often visually represented, communication models are helpful tools to understand the environment and steps that add or remove from a communication context or encounter. This is due to a model's ultimate attempt to abstract and simplify the communication process. Horowitz (2019) highlights a drawback of oversimplification that can arise with communication models. This oversimplification can lead to an inability to capture certain contexts or environmental factors vital to understanding the communication process. Also, the field of communication continues to evolve, creating a necessity for models to also capture and account for these evolutions as time passes. Culture and identity, for instance, are two key environmental factors that exert a heavy influence on communication processes. Leonard et al. (2009) states that culture establishes the norms for communication encounters including who talks with whom and about what; how the communication proceeds; how people encode messages; the meanings or interpretation of messages; the circumstances under which messages may or may not be sent. It is also pertinent to highlight a key evolution in communication by recognizing the changes brought about by technology and digitization. Human communication from intra- and interpersonal communication to mass and organizational communication has been influenced by the changing sphere of technology, especially the internet, computers, and mobile phones, which have enabled digital communication. This paper seeks to consider the interplay of culture and digitization in the communication process and subsequently consider models that fit into the evolving realities of this moment. Therefore, we need to consider the pros and cons of different models and their suitability to interpersonal communication, which involves two or more people passing messages and making meaning to each other.

2. Conceptual Review

2.1. Communication Models

Communication models refer to conceptual models that are useful in explaining the human communication

process. Understanding communication to be the activity of conveying information and meaning through the exchange of thoughts, messages or information by speech, signs, writing and even behavior (Valentzas & Broni, 2011), models help us to represent the various elements that come together to deliver a successful communication encounter. They can also indicate why an encounter is not successful and enable us to think through issues of efficiency within the process. Gallager (2001) indicates that the first major communication model came about in 1948 by Claude Elwood Shannon, with an introduction by Warren Weaver. Subsequently, various models of communication have been described by various scholars. Noskova and Kulikova (2019) state that the analysis of these different models elucidates the structure, elements, and dynamism in the communication process. Kuznar and Yager (2020) define three basic communication models as the transmission model, interaction model, and transaction model.

2.1.1. Transmission Model

The transmission model, which is also known as the linear model of communication, is characterized as a one-way model of communication. In essence, the communication processes in the models that are defined are linear in only one way, with a sender transmitting a message to a receiver (Lapum et al., 2020). The sender and the message are the major considerations in this model, with the receiver being a static point that merely receives the communicated message. The model does not expend any energy in determining whether the receiver received or understood the message. Subsequent transmission models have been regarded as an extension of a linear model proposed centuries ago by Aristotle, which included a speaker, message, and receiver. The dominant spread of radio and telegraphy technology was said to be the major influence in the model because these technology systems mostly support mass communication with limited ability for a receiver to deliver feedback.

2.1.2. Interaction Model

The interaction model includes elements of participants, messages, encoding, decoding, and channels. It considers communication a two-way interactive process with the participants involved within the model alternating their positions of sender or receiver. According to Lapum et al. (2020), feedback is a very important aspect of the interaction model, and

this feedback is said to occur within physical and psychological contexts. The feedback loop in the interaction model encapsulates the presence of two sender-receivers in the model rather than the more straightforward sender and receiver who exist in the linear model. The communication encounter continues due to the alternation of these sender-receivers who often switch into their roles without any conscious thought.

2.1.3. Transaction Model

The transaction model has been described as a reconceptualization of the communication process, which includes a reconceptualization of the roles that senders and receivers play as well as the place of context within communication models. In the case of the transaction model, communication goes beyond the goal of exchange of messages or information and actually serves as a powerful force in generating realities. Lapum et al. (2020) state some of the outcomes in this model: creating relationships, forming intercultural alliances, shaping self-concepts, and engaging with others in dialog to create communities. Senders and receivers in the transaction model are labeled as communicators and simultaneously inhabit both roles. The model also considers social, relational, and cultural contexts and attempts to determine how they shape communication encounters.

2.2. Culture

Culture is fundamental to communication, helping us to recognize and appreciate the underlying understanding that drives the actions of people and how their participation in a group affects the way they communicate. According to Martin and Nakayama (2010), culture is learned, involves perception and values as well as feelings, culture is shared, it is experienced as behavior and it is also dynamic and heterogenous. A key aspect of culture that is captured in some definitions is that it can be unspoken and invisible while still shaping the ideas and attitudes of people (LeBaron & Venashri, 2006). Hofstede's cultural dimensions are still an interesting exploration into differences that can exist and play out across cultures causing conflict when they are not recognized or understood (Kampermann et al., 2021). They include:

Power distance: A measure of the acceptance of a culture to the inequality in power structures. Cultures are characterized as having high or low power distances. In high power distance cultures, less powerful members of society easily accept and settle into a lower hierarchical arrangement and do not bother questioning inequalities. In a low power distance society, however, no one is willing to condone inequalities, and there are consistent demands for leveling the playing field and eradicating existing inequality.

Individualism versus collectivism: This considers societies as either self-centered or possessing close-knit social connections. In societies that are characterized as

individualistic, people concern themselves only with their own needs, while in collectivist societies, people identify themselves as part of a wider group that essentially look after each other.

Uncertainty avoidance: This answers to whether people in a culture are comfortable with the unfamiliar and uncertain. In such societies where people prefer to avoid these uncertainties, they tend to be inflexible and barely tolerate the unconventional; however, in society weak in uncertainty avoidance, people are more open and flexible.

Masculinity versus femininity: Certain attributes are denoted as either feminine or masculine, and this dimension considers towards which qualities society leans. In essence, is competition prized higher as in masculine societies or is care and cooperation prized higher as in feminine societies.

Long-term versus short-term orientation: For this culture dimension, the search for virtue or truth is interrogated. In long-term orientation cultures, individuals think toward long-lasting consequences of actions, avoiding actions that could bring shame to their families or communities and respecting the demands of virtue. In short-term orientation cultures, however, the focus is on the present and quick results or saving face to survive at the present moment.

Indulgence versus restraint: Indulgent societies pursue happiness and look at how they can have fun and enjoy their lives, while societies that focus on restraint delay gratification and have strongly established social norms that uphold that restraint.

These cultural dimensions can lead to conflicts as people from different cultures interact with each other.

2.3. Communication Models and Culture

In studying how culture interplays with communication, Bennett (1998) indicates that the goal is to answer the question of how people who do not share the same cultural experiences interact with and understand each other. Martin and Nakayama (2010) state that the two concepts of communication and culture are interrelated and reciprocal. While communication remains constant within societies, idiosyncrasies of communication do switch from culture to culture. This reality creates friction and conflicts due to cross-cultural perceptions that persist. Barna (1998) highlighted some culture stumbling blocks that can influence communication encounters:

Language differences: This reflects the differences in different languages that exist across different societies or cultures and also the differences in the ways that even the same words in the same language are used in different cultures.

People are people: This relates to the individual that exists even in a cultural communication context. All human persons still have their personalities (the ego), which interface with cultural imprints. It is therefore a stumbling block to assume that everyone communicates alike.

Nonverbal misinterpretations: Related to the

stumbling block of language, nonverbal cues differ from culture to culture, and the same posture or signal can mean different things across cultures.

Tendency to judge: Another stumbling block is to recognize differences in culture but assume our way of life as the most natural, and therefore not taking care to communicate with other cultures.

Stereotypes: These refer to some negative overgeneralizations that are made about cultures, which limit our understanding of the culture and contexts when communicating.

High anxiety: Due to uncertainty in communicating with other cultures, some communication encounters are encumbered by tension on one or both sides, which limits the free flow of communication.

2.4. Communication Models and Digitalization

Communication technology continues to enjoy various evolutions, which influence the communication process. The history of human communication began with the oral or spoken tradition. Through the course of history, the dissemination of messages progressed from simply the oral tradition to scripts, print, wired electronics, wireless electronics, and digital communication. The greatest change in message dissemination in recent history occurred with the introduction of computers and the Internet in the early 1990s (Chen, 2012). This turn in communication technology has enabled digitization, which underlies and supports a new globally connected world, which features intercultural relationships, adaptations, and conflicts (Jurkova, 2021). Brennen and Kreiss (2016) define digitalization as how many domains of social life are restructured around digital communication and media infrastructures. Part of the outcomes of digitalization is enabling global communication, which can lead to greater complexity in relationships among different cultures as they are brought together closer than ever.

Noskova and Kulikova (2019) state that communication models generally involve three structural components, the exchange of information (message), interaction, and understanding derived from the communication encounter (perception), and that these structural components evolve in digital sociocultural environments. For instance, internet media allows for symmetrical creation and consumption of messages. This symmetrical production and consumption can make feedback practically instantaneous and allows everyone to equally participate in communication encounters. Communication models that abstract and simplify elements of communication processes remain useful in understanding these digitally enabled encounters.

3. Method

This review focuses on unearthing four communication models with applicability to digital global communication. Google Scholar was used to conduct a search on communication models and their

analysis. A broad search for communication models was conducted alongside search strings that paired communication models with the following keywords:

- Global communication;
- Digitalization;
- Culture;
- Communication technology.

With the defined search strings, the researcher excavated a total of 60 articles from the Google Scholar database. The articles were read in depth to determine their suitability for the subject. The process is detailed in the flowchart in Figure 1.

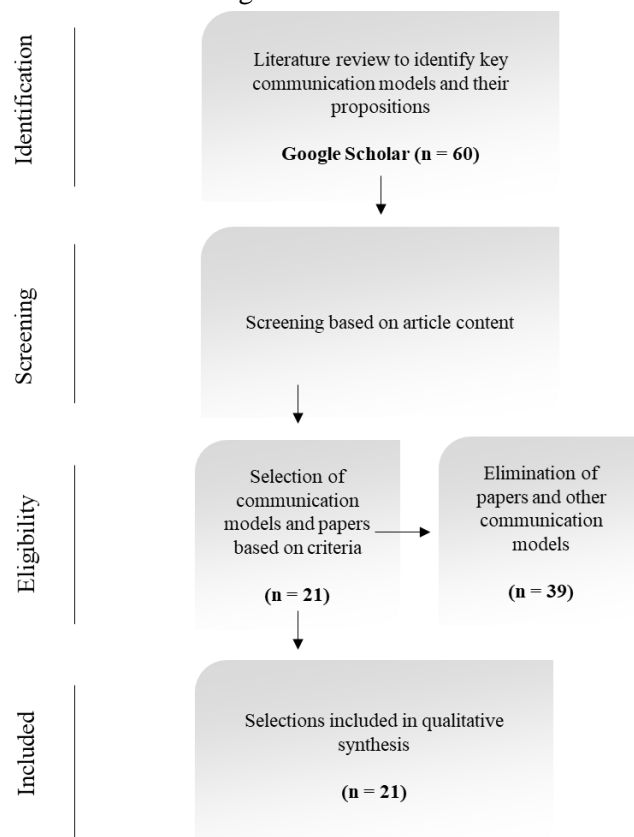


Figure 1. Literature review flowchart on the basis of PRISMA

Following the criteria for selection detailed in Table 1, 21 papers were selected and included in the qualitative synthesis.

Table 1. Inclusion and exclusion criteria

Included	Excluded
Articles in English	Articles in any other language other than English
The article reviews or discusses at least one communication model	The article does not review or discuss a communication model

4. Results and Discussion

Describing communication models, Oni (2013) states that communication goes beyond simply sending a message. A number of choices and considerations go into the process including behavioral aspects, determination of transmission channels, the relationship that may exist between the participants involved in the communication encounter, and even the environmental context within which the communication occurs. Communication can, therefore, be quite complicated,

possessing several variables that tend toward various outcomes in the communication moment.

Communication models help to abstract and simplify the communication process to enable better understanding of the nature and elements of the process. Some similarities can be identified in most communication models, whether linear, interactive, or transactional. One such similarity is the existence of a sender and receiver. While this sender and receiver may alternate roles as in the interactive model, occupy both positions simultaneously as in the transactional model or just be dormant as in the receiver in the linear model, most communication models highlight the presence of a message or information source (sender) and the recipient of the message or information. Most models will indicate some form of noise or interference or perceptual difference that limits a direct or smooth journey for the message that passes from sender to receiver. All models consider how information or messages move from point to point utilizing various mediums and means.

Two linear and two transactional models will be considered in this review as helpful in exploring the interplay of culture and digitalization on communication encounters, especially in interpersonal communication. Although linear models have limited feedback mechanisms, the characterization of a sender and receiver helps to extract important information about the role of experiences and perceptions in the communication encounter. Transactional models especially fit the current digitally-enabled global communication as meaning is cocreated by the participants, and social, cultural, and environmental contexts are heavily considered. The models that this study focuses on are described in detail below.

4.1. The Shannon-Weaver Model of Communication

The model proposed by Claude Shannon and Warren Weaver in 1949 is considered one of the earliest communication models and has been characterized as having marked similarities with the Aristotelean communication model, which is also a linear model (Kuznar & Yager, 2020). Accordingly, the model consists of the elements of information source (sender), transmitter, noise, receiver, and ultimate destination. The sender or information source creates the message, which is both sent by the information source and received by the destination. Foulger (2004) indicates that the transmitter at the time of the model's conceptualization by Shannon was a telephony device that could capture an audio signal and convert it into an electronic signal that is then transported through a telephone network. The transmitter, which can be considered simply as a channel, can also be seen in today's mobile devices and internet networks. Shannon generalized transmission to include a wide range of transmitters, making the connection to present-day communication technology and digitalization easy to draw out. An important element introduced in the Shannon-Weaver model is noise, which involves

secondary signals that can obscure the primary signal. Going beyond Shannon's restrictive depiction of noise as signals that obstruct primary signals within the channel, noise is viewed in present-day characterizations of the model as a metaphor for problems that disrupt effective listening. The receiver in the model referenced a receiving instrument that then conveyed the information to the final destination taking in and presumably understanding the message.

While the Shannon-Weaver model is a linear model that is often recommended more for mass communication, it is particularly helpful in describing different interpersonal communication scenarios where one participant needs to communicate a specific message to another participant. An example can be in cultures where power distance is highly valued, a communication from an employer to an employee via a medium such as an email with instructions can be abstracted through this model. The message travels through the email medium, with noise potentially coming in from language barriers or due to high anxiety on the part of the receiver.

Some of the weaknesses of the Shannon-Weaver model are actually attributed to its focus on the technical rather than issues with the messages or the participants involved in the communication encounter. Lack of a feedback mechanism is also a weakness of the model. The elucidation of the medium and introduction of considerations about noise continue to make this model vital for understanding communication processes at the present age.

4.2. The Osgood-Schramm Model of Communication

One of the first models that attempted to go beyond linear models of communication was Osgood and Schramm's circular model of communication (Kobiruzzaman, 2021). The model is said to cover both intrapersonal and interpersonal communication, i.e., within oneself and between a sender and a receiver. Schramm contested the view of the communication process as starting and ending at particular points. Accordingly, the model characterizes a continuous process with much handling and rerouting of information. Therefore, the sender and receiver in Schramm's model perform reciprocal, identical functions. The concept of interpretation is important in this model, which questions how a message is perceived and understood rather than its mere transmission and reception. Semantic noise is one key concept in this model that highlights the presence of cultural and other dissonances that can distort meaning making from one participant to the other.

Schramm's model is said to combine classic elements with modern elements and is also considered to have a more practical usability than the Shannon-Weaver model. Classic elements include considerations of the participants – sender and receiver – and encoding and decoding functions. Modern elements such as semantic noise and feedback make the model truly valuable in considering a world where cross-cultural

perception is the norm. Semantic noise refers to a concept where the sender and receiver apply different meanings to the same message (Bao et al., 2011). Schramm also considers how participant backgrounds influence their encoding and decoding functions within the model. The background of the sender and receiver impacts how the message is sent and understood. These backgrounds include cultural background, experience, and the individual's knowledge. The differences that exist from culture-to-culture work on the interpretation of the message sent. Schramm also indicates from his model that feedback is essential to the communication process, and a lack of feedback renders the communication encounter ineffective.

The benefits of Schramm's model exist in its dynamic nature, which depicts that situations and scenarios can change depending on participant backgrounds and cultural contexts that are at play. The model's circular nature and presence of feedback also make it valuable in depicting more dynamic communication encounters like those that potentially exist on new media sites. The model's disadvantage is that it is assumed the moment of encoding and decoding.

4.3. The George Gerbner Model of Communication

Mortensen (1972) describes George Gerbner as one of the pioneers in the field of communication research who, through his work, stressed the dynamic nature of communication and other factors that affect the reliability of communication. The communication model by George Gerbner deals with a perceptual dimension, which is a part of an event that is able to be perceived by a "man" or "machine" involved in a communication encounter. Gerbner's model suggests that it is impossible for a participant to perceive the full gamut of an event and defines three factors that determine how much of an event is perceived by them. One of these is selection, where the participant selects what is considered interesting or necessary to them from the occurring event and filters out the rest. The context naturally occurs in the event and determines what the participant picks up; availability is based on the attitude, mood, or culture that the participant comes to the event with.

The second dimension introduced in Gerbner's model is the control dimension, where the participant now has ownership of the event. The event is contextualized by the participant at this stage, and the participant becomes the source of the message about the initial event to someone else. The participant (M) utilizes signs and statements to pass on the message and has to employ channels or media to send the message across, which can grant the participant a greater or lesser degree of control. The participants' ability to deploy the channel properly relates to the degree of control that they then possess. The process described in Gerbner's model can stretch for as long as warranted with other receivers arriving at their own perceptions and passing on their own interpretations of events. At each level, the message is said to be altered or changed

in this model.

Gerbner's model is useful in highlighting the very strong influence of perception in communication encounters. The fact that the message is altered at each touch point and the ability of the model to be extended to include new participants along a particular event path that keeps changing shows a more complex reality of meaning making than some other linear and transactional models and makes it fit more for the reality of this digitally-connected global world.

4.4. The Riley-Riley Model of Communication

The model by Riley and Riley indicates the influence of communicators' social groups on how messages are interpreted (Kuznar & Yager, 2020). Mortensen (1972) describes the Riley-Riley model as depicting an overall social system that contains larger social structures. The larger social structures are further made up of primary groups of which the communicator or receiver are a part. Primary groups have intimate connections with the participants and can run the gamut from friend groups to family or extended relatives. The model also references secondary groups who may not have the same level of intimacy but still can influence the communication process. According to the model, communicators send out messages that align with the expectations of their primary and secondary groups. The receivers likewise fall under the influence of their social groups in receiving the message that has been sent and send feedback to the communicator to rectify any issues or problems that they have identified in the message in that regard.

The model highlights the connection of individuals to social systems and groups that influence their construction and reception of messages. In essence, participants rarely act in isolation in the process of communication, even when they are seemingly representing only their own interests. Feedback mechanisms are also central in the model, making the communicator and receiver interdependent and interrelated as they are locked in their two-way proposition.

5. Conclusion

A more connected world is our present reality with the current technological age of digitalization. It has become a global world offering opportunities for collaboration across cultures, but conflict continues to persist due to cultural differences that show out as perceptions. Conflicts in cross-cultural perception can inhibit communication and collaboration. Communication models, which have always served as helpful visual representations to understand the communication process, can enable us to explore how communication encounters can thrive amidst a diversity of different backgrounds, cultural dimensions, thought processes, and even preferred communication contexts.

Four communication models were suggested and reviewed above, each holding value for navigating this global world of heterogeneous cultural underpinnings.

The Shannon-Weavers model enables a concise understanding of the communication process with two clear participants, a sender and a dormant receiver. The value of this theory lies in the description of a medium that contains signals through which the message passes to get to the destination (receiver). Although Shannon based her model on telephony networks, the model helps us to inspect the various mediums that have been proliferated by the creation of computers and mobile phones alongside the internet. The Shannon-Weaver model also first introduced noise, more from the technical perspective, but today enables us to understand the disruptions that could hinder a receiver from getting the accurate final message.

Schramm's model is the second suggested model. Its depiction of a circular model where the sender and receiver regularly alternate roles during the interaction is useful to expand the understanding of communication in the context of this paper, where two or more cultural world views need to switch roles as they interpret the messages that are passed between them. The introduction of semantic noise and feedback is also an important contribution of this model to the discourse as ambiguity in words or symbols used to convey messages can affect perception and reception of the messages. This is a different type of noise than the one initially brought out by Shannon and Weaver, which focuses more on the transmitter.

Gerbner's model brings in the consideration of perception very strongly as the model starts off with a participant perceiving an event from the environment that is then shaped in their own perception before passing on to the next participant. Social media sites such as Twitter are good examples of this model in action as the user takes an event from their environment to declare what is on their mind, introducing a control dimension where more people can perceive the event and pass it on. The indication that the message never stays the same as it moves from participant to participant is important in this model and highlights how culture and background shape both our construction and reception of messages.

Finally, Riley and Riley's model highlight the larger social structure that we are all always part of and highlights how our primary groups determine or influence the messages we put out and are willing to receive. Feedback, which is present in all the chosen models except the Shannon-Weaver model, is quite important in this culturally diverse global environment as it helps participants to learn and over time avoid conflict in communication encounters. Understanding cultural dimensions in different societies and some of the existing stumbling blocks to effective cross-cultural communication, together with the simplified understanding delivered by these communication models, enables us to be better global communicators as we undertake interpersonal communication.

It is necessary to remember that human communication continues to be about sharing and making meaning and involves more than just the

transmission of messages or information. Meaning is subject to conflict due to cultural and environmental factors, and feedback helps communicators to jointly negotiate the meaning in their communication encounters even if differences in culture, perspective, and how a message is encoded or decoded remain present in communication encounters.

Based on the results in this paper, the apparent usefulness of classic communication models in today's globalized and digital communication environment is highlighted. This paper presents significant connecting lines across the models that support their relevance as a simplification or explanatory tool for communication scholars and communicators even today. The study, however, also suggests some gaps that exist in the explanatory power of the four communication models reviewed.

A digitally enabled global communication can mean that cultures are brought closer together as different people from different cultures can meet and interact among themselves daily. Another possibility of conflicts arising from differing cross-cultural perceptions within communication encounters, however, exists, and human beings as participants within communication encounters can benefit from studying classic communication models. The reviewed communication models present many benefits for understanding our new reality of a digitally enabled global communication that is characterized by conflicts in cross-cultural perceptions, and on the basis of some of the advantages and disadvantages of the models, the following recommendations are made in this paper:

- Learning to adequately use communication technology to reduce technical noise in communication encounters;
- Understanding the cultural and social backgrounds of other communicators in a communication encounter to reduce instances of semantic noise or conflict that can arise from the underlying influence of perceptual differences;
- Creating new communication models that can further merge the new realities of our global cross-cultural communication encounters and provide more utility in understanding the communication process as it has evolved into today.

6. Limitations and Further Study

This paper extends perspectives on the continued relevance of classic communication models in today's globally-connected world. Communication technologies such as the mobile phone and internet and many paradigms that they enabled are considered. However, the communication landscape is already experiencing a significant shift in the face of developments such as Web 3 and artificial intelligence systems. These considerable changes in the communication landscape are not captured in the frame of this review, leaving a gap in understanding how communication models can help to drive an understanding of these evolving contexts. Recommendations are made for further study

of communication models in mixed and artificial reality environments.

References

- [1] BAO, J., BASU, P., DEAN, M., PARTRIDGE, C., SWAMI, A., LELAND, W., & HENDLER, J.A. (2011). Towards a theory of semantic communication. Proceedings of the IEEE Network Science Workshop, West Point, New York, 22-24 June 2011, pp. 110-117. <https://doi.org/10.1109/NSW.2011.6004632>
- [2] BARNA, L. (1998). Stumbling blocks in intercultural communication. In: BENNETT, M.J. (ed.) *Basic concepts of intercultural communication*. Yarmouth, Maine. Retrieved from <https://www.uwindsor.ca/ctl/sites/uwindsor.ca.ctl/files/stumbling-blocks-in-intercultural-communication.pdf>
- [3] BENNETT, M.J. (1998). Intercultural communication: A current perspective. In: BENNETT, M.J. (ed.) *Basic concepts of intercultural communication: Selected readings*. Yarmouth, Maine: Intercultural Press.
- [4] BRENNEN, J.S., & KREISS, D. (2016). Digitalization. In: *The international encyclopedia of communication theory and philosophy*. Hoboken, New Jersey: John Wiley & Sons, pp. 1-11. <https://doi.org/10.1002/9781118766804.wbiect111>
- [5] CHEN, G.M. (2012). The impact of new media on intercultural communication in global context. *China Media Research*, 8(2), 1-10. Retrieved from http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1012&context=com_facpubs
- [6] FOULGER, D. (2004). Models of the communication process. Brooklyn, New Jersey.
- [7] GALLAGER, R.G. (2001). Claude E. Shannon: A retrospective on his life, work, and impact. *IEEE Transactions on Information Theory*, 47(7), 2681-2695. <https://doi.org/10.1109/18.959253>
- [8] HOROWITZ, K.S. (2019). Video Games and English as a Second Language: The Effect of Massive Multiplayer Online Video Games on the Willingness to Communicate and Communicative Anxiety of College Students in Puerto Rico. *American Journal of Play*, 11(3), 379-410.
- [9] JURKOVA, S. (2021). Transcultural Competence Model: An Inclusive Path for Communication and Interaction. *Journal of Transcultural Communication*, 1(1), 102-119. <https://doi.org/10.1515/jtc-2021-2008>
- [10] KAMPERMANN, A., OPDENAKKER, R., HEIJDEN, B.V.D., & BÜCKER, J. (2021). Intercultural competencies for fostering technology-mediated collaboration in developing countries. *Sustainability*, 13(14), 7790. <https://doi.org/10.3390/su13147790>
- [11] KOBIRUZZAMAN, M.M. (2021). Three Types of Communication Models- Linear Interactive & Transactional. *Newsroom - Educational Website for Online Learning*. Retrieved from <https://newsroom.com/3-types-of-communication-models-linear-interactive-transactional/>
- [12] KUZNAR, L.A., & YAGER, M. (2020). *The Development of Communication Models: Quick Look*. Retrieved from <https://apps.dtic.mil/sti/pdfs/AD1118283.pdf>
- [13] LAPUM, J., ST-AMANT, O., HUGHES, M., GARMAISE-YEE, J., & LEE, C. (2020). *Introduction to Communication in Nursing*. PressBooks. Retrieved from <https://pressbooks.library.torontomu.ca/communicationnursing/>
- [14] LEBARON, M., & VENASHRI, P. (2006). *Conflict across Cultures: A Unique Experience of Bridging Differences*. Boston, Massachusetts: Intercultural Press.
- [15] LEONARD, K.M., VAN SCOTTER, J.R., & PAKDIL, F. (2009). Culture and communication: Cultural variations and media effectiveness. *Administration & Society*, 41(7), 850-877. <https://doi.org/10.1177/0095399709344054>
- [16] MARTIN, J.N., & NAKAYAMA, T.K. (2010). *Intercultural communication in contexts*. 5th ed. New York: McGraw-Hill Higher Education.
- [17] MORTENSEN, C.D. (1972). *Communication: The Study of Human Interaction*. New York: McGraw-Hill.
- [18] NOSKOVA, T., & KULIKOVA, S. (2019). Communication models in the digital learning environment. *New Educational Strategies in Modern Information Space: Proceedings of the XIV International Conference, Saint-Petersburg, 16 April 2019*, pp. 50-68. Retrieved from https://ceur-ws.org/Vol-2401/PAPER_5.PDF
- [19] ONI, W. (2013). A Survey of Fundamental Theories, Models and Perspectives on Computer-Mediated Communication. *African Nebula*, 6. Retrieved from <https://www.thefreelibrary.com/A+survey+of+fundamental+theories%2C+models+and+perspectives+on...-a0370032586>
- [20] VALENTZAS, J., & BRONI, G. (2011). Communication cycle: Definition, process, models and examples. *Recent Advances in Financial Planning and Product Development*, 1(4), 117-120. Retrieved from <http://www.wseas.us/e-library/conferences/2014/Istanbul/FINANCE/FINANCE-NCE-17.pdf>

参考文献:

- [1] BAO, J.、BASU, P.、DEAN, M.、PARTRIDGE, C.、SWAMI, A.、LELAND, W. 和 HENDLER, J.A. (2011)。迈向语义沟通理论。IEEE 网络科学研讨会论文集, 纽约西点军校, 2011 年 6 月 22-24 日, 第 110-117 页。<https://doi.org/10.1109/NSW.2011.6004632>
- [2] 巴纳, L. (1998)。跨文化交流的绊脚石。见: BENNETT, M.J. (主编) 跨文化交流的基本概

- 念。缅甸州雅茅斯。摘自 <https://www.uwindsor.ca/ctl/sites/uwindsor.ca.ctl/files/stumbling-blocks-in-interculture-communication.pdf>
- [3] 贝内特, M.J. (1998)。跨文化交流: 当前的观点。见: BENNETT, M.J. (主编) 跨文化交流的基本概念: 选读。缅甸州雅茅斯: 跨文化出版社。
- [4] BRENNEN, J.S. 和 KREISS, D. (2016)。数字化。见: 国际传播理论和哲学百科全书。新泽西州霍博肯: 约翰·威利父子公司, 第 1-11 页。 <https://doi.org/10.1002/9781118766804.wbiect111>
- [5] 陈总 (2012)。新媒体对全球背景下跨文化传播的影响。中国媒体研究, 8 (2), 1-10。检索自 http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1012&context=com_facpubs
- [6] 福尔格, D. (2004)。通信过程的模型。新泽西州布鲁克林。
- [7] 加拉格, R.G. (2001)。克劳德·香农 (Claude E. Shannon): 回顾他的生活、工作和影响。IEEE 信息论汇刊, 47(7), 2681-2695。 <https://doi.org/10.1109/18.959253>
- [8] 霍洛维茨, K.S. (2019)。视频游戏和英语作为第二语言: 大型多人在线视频游戏对波多黎各大学生的沟通意愿和沟通焦虑的影响。美国游戏杂志, 11(3), 379-410。
- [9] JURKOVA, S. (2021)。跨文化能力模型: 沟通和互动的包容性路径。跨文化传播杂志, 1(1), 102-119。 <https://doi.org/10.1515/jtc-2021-2008>
- [10] KAMPERMANN, A.、OPDENAKKER, R.、HEIJDEN, B.V.D. 和 BÜCKER, J. (2021)。促进发展中国家以技术为媒介的合作的跨文化能力。可持续发展, 13(14), 7790。 <https://doi.org/10.3390/su13147790>
- [11] 科比鲁扎曼, M.M. (2021)。三种类型的通信模型-线性交互和交易。纽斯穆尔-在线学习教育网站。检索自 <https://newsmoor.com/3-types-of-communication-models-linear-interactive-transactional/>
- [12] 库兹纳尔, L.A.和雅格, M. (2020)。通信模型的发展: 快速浏览。检索自 <https://apps.dtic.mil/sti/pdfs/AD1118283.pdf>
- [13] LAPUM, J.、ST-AMANT, O.、HUGHES, M.、GARMAISE-YEE, J. 和 LEE, C. (2020)。护理沟通简介。新闻书籍。检索自 <https://pressbooks.library.torontomu.ca/communicationnursing/>
- [14] LEBARON, M. 和 VENASHRI, P. (2006)。跨文化冲突: 弥合差异的独特体验。马萨诸塞州波士顿: 跨文化出版社。
- [15] LEONARD, K.M.、VAN SCOTTER, J.R. 和 PAKDIL, F. (2009)。文化与传播: 文化差异和媒体有效性。行政与社会, 41(7), 850-877。 <https://doi.org/10.1177/0095399709344054>
- [16] 马丁, J.N.和中山, T.K. (2010)。语境中的跨文化交流。第五版。纽约: 麦格劳-希尔高等教育。
- [17] 莫滕森, C.D. (1972)。沟通: 人类互动的研究。纽约: 麦格劳-希尔。
- [18] 诺斯科瓦, T., & 库利科瓦, S. (2019)。数字学习环境中的通信模型。现代信息空间中的新教育策略: 第十四届国际会议记录, 圣彼得堡, 2019年4月16日, 第 50-68 页。摘自 https://ceur-ws.org/Vol-2401/PAPER_5.PDF
- [19] ONI, W. (2013)。计算机介导的通信的基本理论、模型和观点的调查。非洲星云, 6。摘自 <https://www.thefreelibrary.com/A+survey+of+funda+mental+theories%2C+models+and+perspectives+on+...+a0370032586>
- [20] 瓦伦察斯, J., & 布罗尼, G. (2011)。沟通周期: 定义、过程、模型和示例。财务规划和产品开发的最新进展, 1(4), 117-120。摘自 <http://www.wseas.us-e-library/conferences/2014/Istanbul/FINANCE/FINANCE-17.pdf>