Code and Inferential Models of Communication

Communication, Message Theory, Inferential Theory, Relevance Theory

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مقدم من

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Abstract

Communication is the most important characteristic of human social interaction. Thus, two models of communication are discussed; code and inferential models. According to the code model, communication is achieved by encoding and decoding messages. Whereas according to the inferential model, communication is achieved by the communicator providing evidence. Thus, This study makes a comparison between Grice's and Sperber and Wilson's model of communication in terms of inferential model and context in order to arrive at a better understanding of the nature of human communication and find out which theory can enrich the research of pragmatics, and in the description of communication which term intention, inference, evidence, effect or relevance is more common sensational.

The problem is that should the code model and inferential model be amalgamated and if so which inferential theory can be unified with the message model.

Consequently, it is hypothesized that the code model and inferential model are not incompatible. They are complementary since they can account for interaction of linguistic meaning and contextual factors in utterance interpretation.

الخلاصة

إن نظرية التواصل تعد من أهم سمات التفاعل الاجتماعي بين البشر ولذلك تم مناقشة نموذجين للتواصل : النموذج القواعدي (الشفري أو الرسائلي) و النموذج الاستدلالي . يعد النموذج الشفري امكانية تحقيق التواصل عندما يقوم المتواصل بتقديم مايدل عن ماهية غرضه . وبناءاً على ذلك يتخذ البحث مقارنة بين نموذج (كرايس) و(سبيربر وولسن) للتواصل من حيث النموذج الاستدلالي و السياقي للتوصل لفهم افضل عن طبيعة التواصل بين البشر و أي من النظريات بإمكانها ان تغني البحث التداولي ولمعرفة ماهي المصطلحات الاكثر ملائمة للتداول عند وصف التواصل و القصد ، الاستدلالي، ماهية التواصل ، التأثير ووثاقة الصلة بالموضوع .

تكمن مشكلة البحث في أمكانية دمج كلاً من النموذج الشفري والاستدلالي وان كان بالإمكان فعل ذلك فأي من النظريات الاستدلالية يمكن توحيدها مع النموذج ألرسائلي . كما ان البحث يفترض عدم تضارب كلاً من النموذج ألرسائلي والاستدلالي كونهما مكملين للاخر وذلك لتفاعل عوامل المعنى اللغوي و السياقي عند تفسير الخطاب .

1. Introduction

In the last 30 years, there has been a revolution in linguists' view of human communication Code theories , which treat utterances as encoding messages. These Theories have been replaced by inferential theories inspired by the work of Paul Grice which treat utterances merely as pieces of evidence about the communicator's intention. The inferential model of communication suggested by Grice's work and later developed more fully by Sperber and Wilson (1986) capture more of the ambiguity and online interpretation than the traditional code model.

2. What is communication?

What is communication is not an easy question to be answered since it can be applicable to any sort of linguistic framework. Craig (1999:120) notes that Dance (1970) analyzed ninety five definitions of communication put during the 1950s and 1960s , and that Anderson (1996) reviewed seven text books of communication theory and found 249 distinct theories mentioned most only once . So, in Craig's view, definitions of communication are abundant outside of the linguistic neighborhood.

Currently, many definitions of communication are used in order to conceptualize the processes by which people navigate and assign meaning.

Gerbner (1985 : 4) defines communication as " the production and exchange of information meaning by use of signs and symbols , it involves encoding and sending messages receiving and decoding them ,…. communication permeates all levels of human experience and it is central to understand human behavior and to nearly all public efforts aimed at fostering behavior change among individuals , populations , organizations , communities , and societies . "

Gerbner (ibid) states that communication may be studied empirically and critically at different levels of interaction. These levels , often , described on a

micro – to micro continuum are intra-personal (how individuals process information) , inter-person (how two individuals interact to influence one another) , group (how communication dynamics occur among many individuals) . He illustrates that empirical study means applying scientific methods to the study of communication as in the study of behavior change resulting from exposure to a communication campaign, critical study means applying methods of cultural , literary , or normative criticism to the study of communication .

Gerbner (ibid:5) describes three main branches of communication study . The first is **Semitics** which is the study of signs and symbols and how, they combine to convey meaning in different social contexts.

This branch is mainly concerned with how verbal , non verbal , visual , and aural signs and symbols combine to create messages . The second branch, **media effect**, is the study of behavior and interaction through exposure to messages . It emphasizes measuring explaining and predicting communication effect on knowledge , perceptions , beliefs , attitudes and public opinion . The third branch is message **production** which is the study of large – scale organization of communication though social institutions and symbols (mass – media, political organization , etc) .

Craig (1999:121) characterizes various approaches of communication under six collective terms , rhetorical , semiotic , phenomenological , socio psychological , socio cultural and critical .
However Craig (2001:125) names other viewpoints for the framework of communication . These views are **mechanistic** which consider communication as a perfect transaction of a message from the sender to the receiver ; **psychological** which considers communication as the act of sending a message to a receiver and feeling and thoughts of the receiver upon interpreting the message ; **social construction** which considers communication to be the product of the interactants sharing and creating meaning ; **critical** which

considers communication as a sources of power and oppression of individuals and social groups and **systemic** which considers communication to be the new messages created and reinterpreted as it travels through people .

For Crystal (1998:72) communication refers to the transmission and reception of information, i.e, a message between a source and a receiver using a signaling system . He illustrates that in linguistic context source and receiver are interpreted in human terms , the system involved is a language and the notion of response to the message becomes of crucial importance .

According to Sperber and Deirdre Wilson (1986:12), communication is a process which involves two information processing devices . One device modifies the physical environment of the other . As a result , the second device constructs representations similar to those representations already stored in the first device . Oral communication, for them (ibid) mentioned as an example , is a modification by the speaker of the hearer's a acoustic environment , as a result of which the hearer entertains thoughts similar to the speaker's own .
Accordingly , communication is said to have taken place if the information received is the same as the one sent .

For Littlejohn (1992:8) communication is seen as a process which predictably has certain kinds of effect . A major reason is due to the fact that the central issue concerning the nature of communication is to identify the nature of these effects , rather than how the effects were produced . In this juncture , he raises the question whether these effects are in mind , act as a shared body of knowledge or something else .

This view makes a widespread tendency to take the notion of communication for granted and with no need of identification . Similarly the terms of " meaning " and " message " are often used without explanation . It is assumed that communication is easy and the concept of communication is unproblematic , Reddy (cited in Ortony 1987:41) .
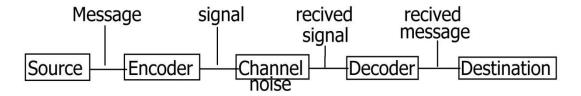
Reddy (ibid) discusses the common assumption that arises including the notion that communication is typically simple and effortless . He disagrees with the assumption seeing it as the source of destructive misunderstanding in more technical studies as well .

Chandler (1994:4) states that communication is also understood as an exchange of understanding or a transmission of ideas . The roots of the assumption can be traced back through Saussure and Locke stooping at Plato . Chandler finds that in spite of the reaction against it , it has become so dominant and widespread among scholars . This is due to the fact that it focuses on the middle regions of interactions where " meaning " and " message " are the part of a letter that occurs after greeting and before the salutation and the part of a dialogue that occurs after the mutual greeting and before the leave taking . Chandler (ibid) adds that among scholars communication is taken as the process which consists of transmitting information from one person to another.

3. The Code Model of Linguistic Communication

Wilson (1993:8) states that from Aristotle though to modern semiotics , all theories of communication are based on a single model which is called a code model. According to the code model , communication is achieved by encoding and decoding messages .

The following diagram of Shannon and Wearer 1949 (cited in Wilson , 1986:32) shows how communication can be achieved by the use of a code .

The code model assumes that communication is a linear process in which a message starts at an information source and is then converted into a singal or a code . This signal then travels to the recipient , who uses his/her decoding

mechanism to extract the information in the signal . The information is then processed and stored by his/her and then he/she can encode his/her own signal to transmit (searle , 1983:68) .

Yokoyama (1987:72) treats communication as involving, (a) a set observing signals , (b) a set of unobservable message and (c) a code , i.e. , a set of rules or procedures pairing messages with signals .

A communicator who wants to convey a certain message transmits the corresponding signal , which is received and decoded by the audience using an identical copy of the code . He adds that successful code communication results in a duplication of messages : the message encoded is identical to the message received .

Fodor (1975:106) explains the meaning of **signal** , a **message** and a **code** . He states that **signals** are wave forms which can be phonetically represented. The **message** are thoughts which can be conceptually represented ; and the **code** is the grammar of a language which pairs phonetic representations .

A kmajian et al (1997:351) point out that linguistic communication is successful if the hearer receives the speaker's message. This stems from the fact that the speaker's messages work since they have been conventionalized as the meaning of expressions , and by sharing knowledge of the meaning of expression , the hearer hence can recognize a speaker's messages are the speaker's communicative intention .

However , the message model of communication seems to be defective in that it does not accommodate most of the common cases of successful linguistic communication . Akmajian etal (ibid) state that in order to recover a determinate message , the message model of communication must assume that

1) The language is unambiguous .
2) What the speaker is referring to is determind by the meaning of the referring expressions uttered .

3) The communicative intention is determind by the meaning of the sentence.

4) Speakers only speak literally .

5) Speakers only speak directly.

6) Speakers use words , phrases , and sentences only to communicate .

These six problems discussed above show why the simple message model of talk exchanges is inadequate to account for the normal human language use . Hence in order for the hearer to identify the speaker's communicative intentions on the basis of speaker's utterances , a shared system of beliefs and inferences must be operating asit will be discussed in the following section .

4. Inferential Theories of Communication

The crucial defect of the message model of linguistic communication is that it equates the message a speaker intends to communicate with the meaning of some expressions in the language . However , this leads to six specific defects : the message model cannot account for (1) the use of ambiguous expressions (2) real world reference (3) communicative intention (4) non literal (5) indirect and (6) non communicative uses of language .

To account for these sorts of fact , an inferential model are called . It connects to which the message with the meaning of the uttered expression by a sequence of inferences .

A kmajian etal (1997:68) state that the inferential model involves a series of inference strategies that take the hearer from hearing the expression uttered to the speaker's communicative intent . For instance , he illustrates that in order to infer the real world reference is to infer the operative meaning which is to contextually disambiguate the utterance and so avoiding the first objection to the message model .

The inferential model also includes inferential, non literal and indirect strategies thereby avoiding the second , fourth and fifth objections ; and it

provides an account of communicative intentions and non communicative uses of language , thereby , avoiding problems three and six .

4.1 Grice's Approach to Meaning and Communication

Grice's work in 1960s showed that communication is possible without the use of a code, i.e., In order to convey a certain thought , the communicator must be able to make his intentions recognizable by the hearer.

In 1957 , Paul Grice published an article , "meaning" which has been the object of a great many controversies , interpretations and revisions . He stresses that intentions are not decoded but inferred . He states that an individual's means something by an utterance X (where utterance is to be understood as referring not just to linguistic utterance but to any form of communicative behavior , Grice (1969:58) .

{S} meant something by X is (roughly) equivalent to {S} intended the utterance of X to produce some effect in an audience by means of the recognition of this intention , (Grice , 1974:58) .

Strawson's (1974:155) reformulation of this analysis separates out the three sub intentions . He states that to mean something by X , S must intend :

(a) S's utterance of X to produce a certain response R in a certain audience A ;

(b) A to recognize S's intention (a);

(c) A's recognition of S's intention (a) to function as at least part of A's reason for A's response .

This analysis can be developed in two ways . Grice himself used it as the point of departure for a theory of meaning , trying to go from the analysis of speaker's meaning towards such traditional meaning and word meaning . However , Grice's analysis can also be used as the point of departure for an inferential model of communication . For example , he (ibid:59) states that suppose that Mary intends to please Peter . If Peter becomes aware of her intention to please him , this may in itself be enough to please him .

He (ibid) adds that in order for intentions to be informed , they should be made recognizable . For example, when Mary intends to inform peter of the fact that she has a sore throat, all she has to do is let him hear her hoarse voice , thus , providing him with salient and conclusive evidence that she has a sore throat , here Mary's intention can be fulfilled whether or not peter is aware of it . He could realize that she has a sore throat without also realizing that she intends him to realize that she has one . Another example provided by Grice is to suppose that Mary intends to inform Peter truly or falsely that she had a sore throat on the previous Christmas Eve . He states that in this time she is unlikely to be able to produce direct evidence of her sore throat .

What she can do is to give him direct evidence , not of her past sore throat , but of her present intention to inform him of it . The best thing for Mary to do, as Grice states (ibid) is to give peter indirect , but nevertheless strong evidence that she had a sore throat on Christmas Eve by uttering :

(1)   I had a sore throat on Christmas Eve .

He states that in this time she is unlikely to be able to produce direct evidence of her sore throat . What she can do is to give him direct evidence , not of her past sore throat , but of her present intention to inform him of it . The best thing for Mary to do so as Grice states (ibid) is to give Peter indirect , but never the less strong evidence that she has a sore throat on Christmas Eve by uttering :

(2)   I had a sore throat on Christmas Eve .

In the example(1) , Mary's hoarse voice is most likely to have been caused by her sore throat . The fact that she had spoken hoarsely is thus direct evidence for the assumption that she had a sore throat . Mary's second utterance is not directly caused by her having had a sore throat on the previous Christmas . However , her utterance is directly caused by her present intentions , although she might have had various intentions in uttering (2) it is most likely that she intended to inform Peter that she had a sore throat on the previous Christmas Eve .

Supposing another state as mentioned by Grice (ibid : 60) one comes to a better understanding of his inferential model of communication . In this case considering Peter assumes that Mary is sincere and is likely to know whether or not she had a sore throat on the previous Christmas Eve . Then , for Peter , the fact that Mary intends to inform him that she had a sore throat on that date provides conclusive evidence that she had .

In these conditions, Mary's intention to inform Peter of her past sore throat can be fulfilled by making Peter recognize her intention . Then she does have all three sub-intentions of the Grice . StrawSon definition (1) as shown in (3)

(3) Mary intends

(a) her utterance (b) to produce in Peter the belief that she had a sore throat the previous Christmas Eve (c) Peter to recognize her intention (a) to function as at least part of his reason his belief .

Thus , it seems that Mary's intentions in this example are quite similar in structure to what one communicate verbally or non- verbally involving pointing , mimicry and other type Ostension or display , for example , if one sees another person takes out a key and walks towards a door , he makes the plausible inference that the person intends to unlock the door , etc.

Accordingly , Grice shows two different ways of conveying information . one way is to provide direct evidence for the information to be conveyed another way of conveying information is to provide direct evidence of one's intention to convey it . The first method can only be used with information for which direct evidence can be provided . The second method can be used with any information at all , as long as direct evidence of the communicator's intention can be provided . This second method is clearly a form of communication which is called inferential communication . It is inferential in that hearers infer the communicator's intention from evidence provided for this precise purpose .

The goal of inferential communication, as Grice (1968:28) indicates is to explain how the hearer infer the speaker's meaning on the basis of the evidence provided . He claims that utterances automatically create expectations which guide the hearer towards the speaker's meaning . Grice describes these expectations in terms of a co-operative principle and maxims of quality , quantity , relation and manner (truthfulness , informativeness , relevance and clarity) which speakers are expected to observe and the interpretation the hearer should choose is the one the best satisfies those expectations . However , according to Grice conversational implicatures are triggered . for instance , tautologies like / Boys are boys / and / War is war / are extreme examples in which the first quantity maxim is violated . At the superficial level , they are totally uninformative . At a deeper level , however , they are informative they may convey implicatures like boys are naughty and mischievous by nature . It's no use lamenting the tragedies of war . Terrible things always happen in it . That's its nature . This is one of the cases in which violation of these maxims occurs .

According to Grice (ibid:42) implicature works as follows : Speaker **S** has said un utterance **U** . There is no reason to think S is not observing the cooperative principle Q . In order for **S** to say that **U** and be indeed observing the cooperative principle , S must think that **Q** . S must know that it's the mutual knowledge that **Q** must be supposed if S is to be taken to be cooperating and then implicating **U** violations of these maxims are also informative as they providing additional evidence about the communicator's informative intent.

4.2 Inferential Communication

In the last fifteen years , Dan Sperber and Deirde Wilson(1986:32) have developed an inferential account of communication which aims to be more explicit than Grice's ground-break in but very sketchy account . They(ibid)

share Grice's intuition that utterances raise expectations of relevance and their central claim is that the expectations of relevance raised by an utterance are precise enough , and having predictable meaning . The aim is to explain in cognitively realistic terms that these expectations of relevance amount to , and how they might contribute to an empirically plausible account of comprehension , (Wilson & Dan Sperber 1988:80) .

The basic ideas of the theory are illustrated in the definition of relevance . Relevance is defined as every act of ostensive communication which communicates the presumption of its own optimal relevance . To understand this definition, "ostensive " communication and presumption of optimal relevance should be elaborated .

Wilson and Dan Sperber (ibid) agree with Grice that communication is not simply a matter of encoding and decoding , it also involves inference . However , they maintain that inference has only to do with the audience . From the communicator's side, communication should be seen as an act to make his intention manifest . so the complete characterization of communication in ostensive – inferential , (Sperber and Deirdre Wilson 1986:ibid) .

Sperber (1994:179-98) explains the meaning of optimal relevance by referring to the two conditions An ostensive act is optimally relevant to an audience if :

a. It is relevant enough to be worth the audience's processing effort .

b. It is the most relevant one compatible with the communicator's abilities and preferences .

He (ibid) states that according to clause (a) of this definition of optimal relevance , the audience is entitled to expect the ostensive act to be at least relevant enough to be at least worth processing . An act is worth processing only if it is more relevant than , thus , in order to satisfy the presumption of relevance conveyed by an ostensive act , the audience may have to draw stronger conclusions than would otherwise have been wanted .

For example, if one notices his friend's Mary empty glass he may be entitled to conclude that his friend might like a drink . If she waves it about in front of him. He may be entitled to conclude that she likes a drink . According to clause (b) of the definition of optimal relevance as mentioned by sperber (1994:200) , the audience of an ostensive act is entitled to even higher expectations than this . In the above example the communicator wants to be understood . It is therefore in his interest within the limits of his own capabilities and preferences . consequently , to make his ostensive stimulus as easy as possible for the audience to understand , and to provide evidence not just for the cognitive effect he aims to achieve in his audience but also for further cognitive effect . This effect will help him achieve his goal .

5. Differences between Grice's Conversational Theory and Sperber's and Wilson's Relevance Theory

In the abovementiond section, the study touched upon Grice's conversational theory and Sperber's relevance theory slightly, in the following part, focus will be upon differences in terms of inferential model and context.

5.1 Inferential Model

Firstly , Grice (1989 : 69) embraces inferential model to the extent that he completely discarded code model . His central claim is that on essential feature of most human communication , both verbal and non − verbal is the expression and recognition of intentions .

Generally speaking , the recognition of the communicator's intentions as he states lies largely upon inference . For example , when one sees his friend taking out his keys and give them to him in front of a locked door and his hands are preoccupied with various packages , he may justifiably conclude that his friend might ask him to open the door . However , for Sperber and Wilson (1994:179) inferential model and code model can be reconciled . In their argument , code model is indispensable part during verbal communication .

Secondly , Grice (1968 : 230) takes inference as a form of a conscious discursive reasoning process . However, Wilson (1994:179) holds the view that it is hard to believe that even adults go through such conscious forms of reasoning in interpreting ordinary utterances. They believe inferential processes in general are instantaneous , unconscious and automatic .

Thirdly , their basis of inferential model is different . For Sperber and Wilson (1987 : 698) it is people's cognitive nature that guides them engrossed in the inference process . Relevance theory claims that human have an automatic tendency to maximize relevance , not because they have a choice in the matter but because of the way there . Cognitive system has involved. They claim that human cognitive system has developed in such a way that their perceptual mechanisms tend automatically to pick out potentially relevant stimuli . They add that people's memory tend automatically to pick out relevant assumptions and their inferential mechanisms tend spontaneously to process them in the most productive way. On the contrary, Grice (1968 : 231) points out that , it is the cooperative principle and the tendency to obey the maxims which drive people in such a process .

5.2 Context

As far as Grice's inferential model is concerned (1969: 151) , context involves as a presupposition . Thus , it is preset invariable and static . For him only if the context and cooperative principles are decided , the audience can judge whether the communication obeys or flouts one of the four maxims and then infer its linguistic meaning according to how he or she treats the maxims . For example , suppose that Peter says " He hasn't got a girl friend , has he ? " Rose " he has often been New York recently . " Rose's answer suspends the maxim of relation . thus, according to Grice's theory , people can deduce the conversational implicature " He might get a girlfriend in New York " yet , Grice couldn't account why the audience would choose this implicature instead

of others under the guidance of cooperative principle – For example , one can infer that he is so busy that he doesn't have time to find a girlfriend . However , for relevance theory context is a psychological construct which represents an individual's assumptions about the world at any given time and place and is supposed to include the following information : logical information , information about the objects , properties , events which are instantiated in the context , and lexical information : the lexical rules which allow us to interpret the natural language , utterance and sentences ,(Sperber and Wilson 1995 : 76). For Sperber and Wilson (ibid) , context is decided by the audience and is invariable . In order to interpret the meaning of the utterances , the audience has to form the contextual assumption and apply them as the presuppositions for inference .

6. Conclusions

1. The code model and the inferential model are not incompatible . They can be combined in various ways . Verbal communication involves both coding and inferential processes . Thus, both the code model and the inferential model can contribute to the study of verbal communication in general . consequently, the code model and the inferential model are each adequate to a different model of communication ; hence , upgrading either of status of code or inferential model of communication is a mistake . It is obvious that both coded communication and inferential communication are subject to general constraints which apply to all forms of information processing. However, the two models can be regarded as a unitary phenomenon of communication that the inferential model is not an alternative to the old approach but rather as an elaboration of it.

2. The description of communication in terms of intentions, inference, evidence effect , and relevance is common sensual since all speakers and hearers intend our hearer to recognize our intention to inform them some state of affairs . Hearers are interested in the meaning of the sentence uttered as it provides evidence about what the speaker means . Hence , communication is successful not when hearers recognize the linguistic meaning of the utterance only , but also when they infer the speaker's meaning from it . According , to achieve this , individuals must focus their attention on what seems to them to be the most relevant information available . Hence , to communicate is to imply that the information communicated is relevant .

3. Grice tries to account for the variable and complex human communication , verbal or non verbal thought a series of concrete rules and maxims . However , only to find the rules is too numerous to enlist . nevertheless , for relevance theory there are no rules or maxims for the communicators to observe . It only describes the characteristics of people's cognitive processes in that the hearer should take the linguistically encoded sentence meaning and enrich it at the

explicit level and complement it at the implicit level until the resulting interpretation meet his expectations of relevance .

4. Relevance theory proves to be more scientific in that the most advantage edge is that it changes the fate of pragmatics making the research in this field more systematic because there is only one principle relevance . However , no theory is complete the main obstacle to relevance theory is that it is indeterminate . It neglects the social norms or conventions emphasized by Grice's framework . Thus, all the defects of relevance theory should be taken as the point needs developing .

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