

Communication, Information, and Pragmatics

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INTRODUCTION

The intention of this article is to clarify the relationship between communication and information by considering pragmatics. Although these terms are closely related, they are not the same. In order for communication to occur the information that is transmitted must be processed within the social context of the sender and the receiver or in other words through the use of pragmatics. That is, there is no communication between the sender and the receiver if the receiver does not understand the information sent by the sender. Information before it is interpreted is therefore nothing more than the signal. It only becomes communication, if it is properly interpreted by the receiver of the information. And it is only through the context or the pragmatics that the receiver can understand the intended meaning of the sender and therefore as a result communication can take place. Misinterpretation leads to miscommunication. As no interpretation is perfect as pragmatics between the sender and the receiver is never perfect the content of the communication depends on the user and the user's interpretation, which McLuhan formulated with his iconic one-liner *the user is the content*. In actuality the sender, the receiver and their understanding of each other are all part of the content.

BACKGROUND

The context in which the information is interpreted is the only way that the meaning that was intended by the sender can be understood by the receiver, but the meaning that the receiver attaches to the information sent by the sender will always vary to some degree (Chan, Walker & Gleaves, 2015; Gibbs et al, 2015; Gui & Argentin, 2011; Introna & Nissenbaum, 2000). Because the 'user is the content' all communication is miscommunication to a certain degree. Perfect communication is an ideal that all communicators strive to achieve through the art of rhetoric. To sum up what we have just posited: information is required for communication but does not necessarily result in communication and never results in perfect communication. The extra ingredient that is required to transform information into communication is context or pragmatics, which is never perfect. Recent methodological innovations try to account for the pragmatics on digital environments (Boyd and Crawford, 2012; Hine, 2005; Lee and Chen, 2015).

In this article we will first examine the meaning and significance of information, which will entail a critique of Shannon Information Theory. We will show it is really a theory of the transmission of signals. We describe how MacKay and Bateson with their respective formulations of "information

is the distinction that makes a difference (MacKay, 1969)” and “information is the difference that makes a difference (Bateson, 1973)” adds the element of meaning to the definition of information. We then examine the proposition of Kauffman, Logan et al. (2007) that organization is a form of information and that life entails the propagation of organization.

Assuming that it is not possible not to communicate, we emphasize the pragmatic dimension of communication. We argue that ‘information,’ ‘communication’ and ‘social interaction’ are inseparable elements of production of meaning, even if analytically they can be conceived as independent concepts. Thus, as in any communication there are three simultaneous dimensions operating as a system – syntactic, semantics and pragmatics, and it is also the case that ‘information,’ ‘communication’ and ‘social interaction’ are operating as a system. In this sense, speech acts owe their meaning to performances in the context of what information the sender sends, the interpretation of the receiver and the social context that exists between the sender and the receiver. We argue that, from the differential emphasis on the syntactic, semantic or pragmatic dimensions of communication, lies a major difference between models for the theory of communication: communication as transmission of information or communication as a relational activity.

Information: From Origins to Shannon’s Information Theory

The English word information according to the Oxford English Dictionary (OED) first appears in the written record in 1386 by Chaucer. It is derived from Latin through French by combining the word “inform” meaning “giving a form to the mind” with the ending “ation” denoting a noun of action. This earliest definition refers to information as an item of training or molding of the mind. Information is not an object but a process of forming or informing the mind.

The notion of information as something capable of storage in or the transfer to something inanimate and the notion of information as a mathematically defined quantity does not arise until the 20th century. The beginning of the modern theoretical study of information is attributed to Claude Shannon (1948), who is recognized as the father of information theory. He defined information as a message sent by a sender to a receiver. Shannon wanted to solve the problem of how to best encode information that a sender wished to transmit to a receiver. Shannon gave information a numerical or mathematical value based on probability defined in terms of the concept of information entropy more commonly known as Shannon entropy. Information is defined as the measure of the decrease of uncertainty for a receiver. The amount of Shannon information is inversely proportional to the probability of the occurrence of that information, where the information is coded in some symbolic form as a string of 0s and 1s or in terms of some alpha-numeric code.

MacKay’s Counter Revolution: Where Is the Meaning in Shannon Information?

According to Claude Shannon (1948) his definition of information is not connected to its meaning. However, as Shannon suggested, information in the form of a message often contains meaning but that meaning is not a necessary condition for defining information. So it is possible to have information without meaning, whatever that means.

Not all of the members of the information science community were happy with Shannon’s definition of information. Three years after Shannon proposed his definition of information Donald Mackay (1969) suggested that information should be defined as “the change in a receiver’s mind-set,” and thus with meaning. He defined information as “a distinction that makes a difference.” and not just the sender’s signal (Hayles, 1999). The notion of information independent of its meaning or context is like looking at a figure isolated from its ground.

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