A Model of Deceitful Information Communication: Some Views on Theory and Practice of Semantic Information

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Abstract: This presentation is going to propose a model of deceitful information communication in terms of the Shannon-Weaver model, which is a classical model in theory of communication. It also makes a brief analysis on the four characteristics of the new model.

Keywords: model; deceitful information; communication; semantic information

In the field of information science and philosophy of information, semantic information [1] is a hard nut to crack. In spite of this situation, some scholars pay their attention to this topic.

Recently, with the development and popularization of modern information technology, network and telecommunication fraud is becoming more and more common and serious. Similar cases suggest that theorists must study a new type of semantic information: deceitful semantic information and deceitful information communication.

In ancient times, some scholars concerned about some issues of communication. In modern times, Claude Elwood Shannon established a modern theory of communication and proposed a model of communication in 1948. However, the model is widely called Shannon–Weaver model of communication and regarded as the "mother of all models." [2] Shannon-Weaver model can be illustrated as follows.

Figure1 The Shannon-Weaver Model
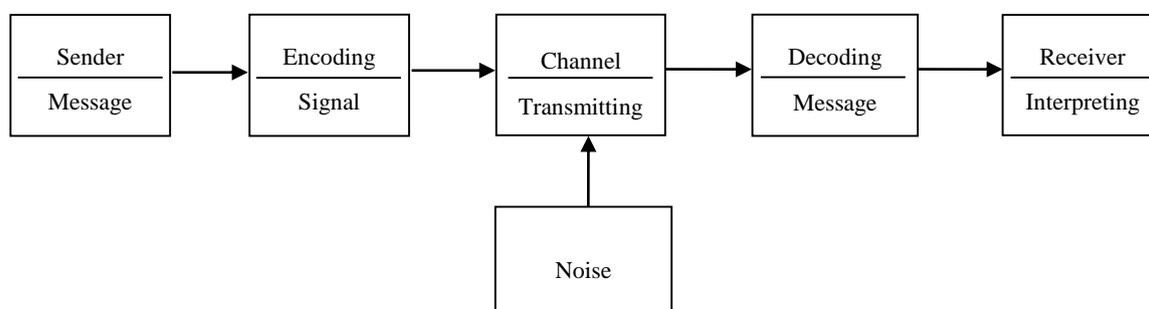
On one hand Shannon distinguished signal from message; on the other hand Shannon says, "The fundamental problem of communication is that of reproducing at one point either exactly or approximately a message selected at another point. Frequently the messages have *meaning*; that is they refer to or are correlated according to some system with certain physical or conceptual entities.

These semantic aspects of communication are irrelevant to the engineering problem." [3] It mean**s** that Shannon excluded the semantic dimension in the field of communication.

However, as far as social communication is concerned, the semantic dimension has to be included rather than excluded. So Weaver points out that there are three levels of communication: level A as the technical level, level B as the semantic level, and level C as the effectiveness level. [4]

Because of the difficulty of semantic research, only a minority of scholars research the topic of semantic information and semantic information communication in the field of information science.

We have to admit that in the field of traditional information science, semantic information and semantic information communication is one the most difficult topics to work on. For example, it is impossible to imagine that a telegram can be charged by semantic information rather than by words. However, in the field of information ecology semantic information and semantic information communication become a subject that must be studied.

As for semantic information communication, there are three kinds of communication: normal semantic information communication, secret semantic information communication and deceitful semantic information communication. This article focuses on the last one.

As for deceitful communication, a new model should be proposed, because Shannon-Weaver model no longer fits for this situation. A model of deceitful communication can be illustrated as follows.

Figure 2 The model of Deceitful Communication
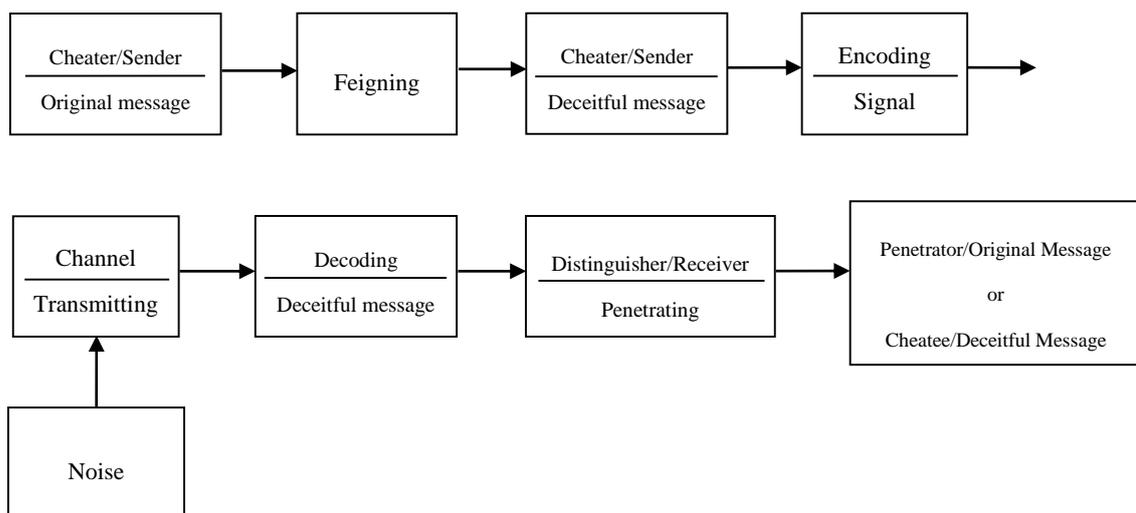
In comparison to Shannon-Weaver model, this model has four characteristics.

First, in the aspect of role structure, besides sender and receiver, four new roles enter into this model, which are cheater, distinguisher, penetrator and cheatee.

Second, in the aspect of operation, besides encoding and decoding, two new operations enter into this model, which are feigning and penetrating.

Third, while Shannon-Weaver model involves only level A that Weaver defines, the model of semantic information communication involves the semantic information. What's more, semantic information is divided into two kinds, normal semantic information and deceitful semantic information. The model focuses on the latter.

Last but not least, in the aspect of ethics and axiology, the most important thing is that the concept deceitful information can be interpreted as a neutral concept rather than a negative one. For examples, when one tells a white lie or a spy for the sake of justice sends deceitful information in order to mislead the enemy, the pieces of deceitful information have positive value. In a word, the impact of deceitful information can be negative or positive.

In order to interpret this model, we should emphasize four points.

First, in the field of traditional information science, semantic information seems to be a paradoxical topic. On one hand semantic information is regarded as an important topic in theory; on the other hand semantic information approach is regarded as useless in practice.

Second, although Weaver pointes out there levels of information, he does not explain   how to change level A of information into level B. According to linguist Ferdinand de Saussure, sign is a unity of signifier and signified.[5] Going a step further, we can consider that when a person uses a symbol he gives it a sememe. So the process of communication includes two main operation，giving meaning and interpreting meaning.[6] This is why and how semantic information is produced and can be changed.[7]

Third, semantic information is divided into two categories, normal semantic information and deceitful semantic information. As for semantic information communication, it is important to note that the model of deceitful semantic information is formed by adding cheater and feigning at beginning and distinguisher, penetrating and cheatee to Shannon-Weaver model.

Fourth, at first appearance, deceitful semantic information which is false information is a particular topic rather than a general one in the field of semantic information study. However, from point of view of giving meaning and interpreting meaning, on one hand deceitful semantic information is not semantic-information-itself as symbol, but is a result of giving meaning by cheater; on the other hand deceitful semantic information can be believed information or exposed information both as a result of receiver-distinguisher's penetrating his received information. It means that besides ordinarily giving and interpreting normal meaning, people must attach importance to special giving and penetrating deceitful meaning, which is also a common social phenomenon.

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