

Assignment #1

**CMSC 828D – Human Level AI and Computational
Cognitive Neuroscience**

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Hebert Paul Grice, is a philosopher who made great contributions to the study of semantics. Grice's theories in meaning, implication and communication are highly influential, and thus he is considered to be the founder of the area in which meanings of utterances can be analyzed in terms of utterers' intentions [1,2].

Three of his most important theories concern the distinction between speaker's meaning and literal/linguistics meaning, the conversational implicature and the nature of communication. Generations of linguistic/philosophy researchers have benefited from his important discoveries and insights, and in return make his theories continue to develop [1,2,3,4], for example, the post-Gricean and neo-Gricean pragmatics witnesses some of those developments [11].

In 1967, from rainy England to Boston in New England, Paul presented a series of lectures on "Logic and Conversation" in Harvard University [2], he discussed an interesting idea called conversational implication and fully explored it during talks. On his own account, "what a speaker said literally" and "what a speaker implicated" could be vastly different, thus speakers' meaning and ultimately sentence meaning are to be better analyzed in terms of speakers' intentions.

Such differences, or the distinctions between speaker's and linguistic meaning, are typically interesting, for example, after having a dinner in an expensive restaurant, speaker A says "*It was edible*"[13]. This sentence implicates, actually quite explicitly, that speaker A is not fully satisfied with this restaurant and it is just mediocre at best, although the literal meaning of this sentence does not have any related information.

As another example below between speaker A and B,

A. *Can I use your car for tonight's party?*

B. *Let me think about it.*

Speaker B's response could really mean he is evaluating the suggestions, while on the other hand, probably speaker B is just saying, "No way" in a more polite way.

As a third example, say a computer science Professor A's evaluation on his student B is needed. By uttering the sentence "*Mr. B has excellent handwriting and is always very punctual*"[10], Prof. A mentions B's goodness, however, Prof. A also conversationally implicated that B is not good at CS, because if B is good at CS, Prof. A should mention it but he does not do that at all.

Grice discovers that what the speaker really means is not purely from linguistic rules, but rather should be from the intentions of the speaker, and he realizes that such effect can be achieved by letting speaker's audience to recognize his intention. Such considerations include the fact that the audience can understand what the speaker talks, and can recognize speaker's implications/intentions implicitly and typically. Conversations to certain extent include cooperative elements which is because two speakers could have similar background, and thus Grice proposed a cooperative principle,

Make your contribution such as it is required, at the stage at which it occurs, by the accepted

purpose or direction of the talk exchange in which you are engaged.

This cooperative principle can then be divided into four maxims, including Maxim of Quality, Maxim of Quantity, Maxim of Relation and Maxim of Manner [12]. This principle is highly important for researchers to study the human language and has its own important findings, but on the other hand, it also has criticisms along the way. For example, some one believes this principle is just an architect's blueprint[5]. Different researchers held different opinions and proposed different new principles, such as rationality principle [6], politeness principle [7], Q-principle [9], relevance principle [8] and so on. There are two groups on such debates, the Post-Gricean group tries to replace the cooperative principle, while the Neo-Gricean group is positive on the original principle but tries to improve it.

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