A Relevance Theoretic Analysis of Verbal Humor in *The Big Bang Theory*

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Abstract
Relevance theory proposes a hypothesis of relevance in human communication. Human communication is an ostensive-inferential process, in which the hearer tries to seek the intended relevance by selecting different context assumptions. It is applicable to humor study. This paper takes the sitcom *The Big Bang Theory* as a case study. By analyzing some verbal humor examples within this framework, it proves that humor comes from the contrast between maximal relevance and optimal relevance.

Key words: Relevance theory; Verbal humor; *The Big Bang Theory*

INTRODUCTION
As a special kind of human communication, humor is always welcomed by people. No one can resist its power, because it can bring happiness and pleasant feeling to a person in depression; it can soothe a sad heart and give people a comfortable feeling. In a sense, humor is a way to a happy and colorful life. Since it plays an indispensable role in human communication, humor has been studied from different disciplinary viewpoints including philosophy, psychology, sociology, literature, rhetoric, linguistics and so on. With the development of humor study, the linguistic perspective is becoming the mainstream of thoughts because it is more applicable and more systematic. In this paper, a pragmatic theory, relevance theory will be employed in studying the creation and appreciation of humor. The theory is developed on the basis of communication and cognition. Although Relevance theory is not specially designed to study humor, it has been proved a very efficient framework to study humor, a special kind of communication.

American situation comedy is gaining on popularity in China, especially among young people. The recent hit series *The Big Bang Theory* will be taken as data source in this humor study.

The study of the verbal humor in sitcoms has both theoretical and practical values. Theoretically, it will enrich humor study, an important aspect of linguistic study. Practically, it will help Chinese people appreciate this form of TV artistic work better and hence enhance cross-cultural communication. At the same time, this kind of study also helps with English teaching in China. This paper will analyze the verbal humor in one of the recently popular sitcom *The Big Bang Theory* cognitively within the framework of the relevance theory. In the following, a general research history of humor and an introduction of *The Big Bang Theory* will be given respectively.

Research on Humor
The study of humor can trace back to the time of Aristotle and Freud. A commonly accepted classification divides traditional theories of humor into three groups: the Superiority Theory, the Release Theory and the Incongruity Theory.

The Superiority Theory is mainly advocated by Aristotle and Hobbes. It holds that humor is an expression of superiority. We laugh at other’s misfortune or shortcoming, which reflect our sense of superiority. It’s characterized by one’s cognitive comparison of self against others on the basis of intelligence, beauty, strength, wealth and in a subsequent personally-experienced elation, triumph or victory as a result of such self-others comparisons.
The release theory examines humor from psychological perspectives. It points out that laughter is a means which can be used to release or reduce the strain coming from controlled thought or rationality. Freud is the chief exponent for the release theory.

The Incongruity Theory studies humor cognitively for the first time. In this theory, humor involves some kind of difference between what one expects and what one receives. It’s based on the mismatch between two ideas in the broadest possible sense.

As the linguistic research on humor in modern times develops, Semantic-oriented studies on humor prevail in the early year of humor research, among which the Semantic Script Theory of Humor (SSTH), and the General Theory of Verbal Humor (GTTH) are the most influential. However, many recent studies have given attention to the social factors, especially in pragmatic-oriented studies of humor. Pragmatics, with its programmatic lack of boundaries, is becoming the natural place to locate the linguistic side of the interdisciplinary study of humor.

**A Short Introduction of The Big Bang Theory**

Situation comedy or sitcom is a television program lasting nearly half an hour long with a regular cast and in a regular location such as household or workplace. Humor, especially verbal humor plays a crucial part in creating the entertaining effect of the comedy.

*The Big Bang Theory* is an American situation comedy created and produced by Warner Bros. Television and Chuck Lorre Productions. It won the best comedy series TCA award in August 2009, and is honored as “the best situation comedy after Friends.

The two main characters in the show are two roommates who work at the California Institute of Technology, one is experimental physicist Leonard Hofstadter and the other is theoretical physicist Sheldon Cooper. They are brilliant physicists with higher than average IQ, but quite awkward in social skills. They have two equally geeky friends and co-workers, Howard Wolowitz, an aerospace engineer, and Rajesh Koothrappali, a particle astrophysicist. Across the hall lives Penny, an attractive blonde waitress and aspiring actress, who later becomes Leonard’s girl friend; the geekiness and intellect of the four guys is contrasted with Penny’s social skills and common sense for comic effect.

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1. **RELEVANCE THEORY**

1.1 **Maximal Relevance and Optimal Relevance**

In Relevance: Communication and Cognition, Sperber and Wilson (1986/1995) present a new approach to the study of human communication. This approach is grounded in a general view of human cognition, that is, human attention and thought automatically turn toward information which seems relevant: to communicate is to claim someone’s attention; hence to communicate is to imply that the information communicated is relevant. To be in general, Sperber and Wilson coined the idea “the principle of relevance” for the purpose of explaining human communication from a cognitive point of view. This theoretical claim is valid for any type of ostensive communication, humorous utterance included (Yus, 2003).

Sperber & Wilson define “relevance” in terms of contextual effect and processing effort:

An assumption is relevant in a context if and only if it has some contextual effect in that context. (Sperber & Wilson, 1995, p.122)

**Extent Condition 1:** An assumption is relevant in a context to the extent that its contextual effects in this context are large.

**Extent Condition 2:** An assumption is relevant in a context to the extent that the effort required to process it in this context is small. (Sperber & Wilson, 1995, p.125)

Other things being equal, an assumption with greater contextual effects is more relevant; and, other things being equal, an assumption requiring a smaller processing effort is more relevant.

Since the relevance requirement applies to cognition and communication differently, there are two general principles of relevance. First, the cognitive principle: human cognition tends to be geared to the maximization of relevance. Relevance theory assumes that every aspect of communication and cognition is governed by the search for maximal relevance (i.e. the greatest possible effects for the smallest possible effort). Second, the Communicative Principle: every act of ostensive communication communicates a presumption of its own optimal relevance.

An utterance, or a given interpretation, is optimally relevant if and only if:

It achieves enough contextual effects to be worth the hearer’s attention;

It puts the hearer to no gratuitous processing effort in achieving those effects.

It is a tendency during the conversation for the hearer to compare the new information with the knowledge he already has, then focus on the information which is most related to his knowledge, and lastly make an assumption about the speaker’s intention by processing the information with the least effort to reach the goal of cognition. While at the same time, human communication creates an expectation of optimal relevance in the hearer, that is, adequate information is supposed to be provided for the hearer to understand the speaker’s intention with minimal processing effort (Sperber & Wilson, 1995). However, due to differences in personal experiences, cognitive background and communicative abilities between the speaker and the hearer, optimal relevance may not be achieved, and thus create misunderstandings.
and humorous effects on different scenes. Humor comes from the contrast between maximal relevance and optimal relevance.

### 1.2 Ostensive-Inferential Communication

According to Sperber and Wilson’s view, communication is an ostensive-inferential process. From the perspective of a speaker, communication is ostensive and ostension involves two layers of information. “First, there is the information which has been, so to speak, pointed out; second, there is the information that the first layer of information has been intentionally pointed out” (Sperber, & Wilson, 1995). To be more specific, among the first layer, the speaker provides his informative intention by making manifest to the listener what the speaker has said, while among the second layer, the speaker states his communicative intension by making the listener understand what the speaker really wants to do.

From the perspective of a listener, communication is inferential. In order to make the communication successful, the listener is supposed to select the right contextual assumptions, which is intended by the speaker. If the listener can’t draw inference from the speaker, he or she may not fully understand the utterance or cause conflict during the communication.

### 1.3 Context

Every utterance is conducted between two parties of different, complex background. The success of a communication depends much on such background, also regarded as context, which will be used during the interpretation of the meaning.

Relevance theory enhances the idea that context or background assumptions play a crucial role in the human communication process. According to relevance theory, context is not fixed and stable. It is regarded as a dynamic one and a matter of choice, and the selection of a particular context is determined by the search for relevance. That means what the recipient expects is the stimulus, which is a relevant one, and s/he tries to choose a context in which that expectation can be justified, namely, s/he achieves a context which will maximize relevance. As we put before, in relevance theory, relevance is treated as given, and context is regarded as a variable. Whether the hearer can select a correct context has a direct effect on the interpretation of the utterance. So context selection plays a significant role in utterance interpretation.

Sperber and Wilson regard context as “a psychological construct, a subset of the hearer’s assumptions about the world…it is not limited to information about the immediate physical environment or the immediately preceding utterances: expectations about the future, scientific hypotheses or religious beliefs, anecdotal memories, general cultural assumptions, beliefs about the mental state of the speaker, may all play a role in interpretation”. (Sperber & Wilson, 1986, p.15). In this sense, context can be considered to be a kind of cognitive environment. It involves not only the facts that an individual can feel or infer, but also his ability of figuring out all such facts. Context is chosen rather than given. It helps the hearer to make assumption toward the speaker’s intention in a conversation. So a successful communication is based on the condition that the hearer selects the correct context to interpret the utterance.

### 2. THE COGNITIVE MECHANISMS OF HUMOR PRODUCTION AND APPRECIATION FROM THE PERSPECTIVE OF RELEVANCE THEORY

Relevance theory is not developed specific for humor research, but its theoretical hypothesizes are suitable and reasonable to cope with how verbal humor is produced and comprehended in human communication. Relevance theory is based on human cognition and communication, with its communicative principle ensuring its feasibility in interpreting all sorts of discourse, including the humorous ones, while its cognitive principle mirror the biologically-rooted human trend to seek for the most relevant information hidden in the process of communication.

Relevance-theoretic hypothesizes are reasonable to demonstrate how verbal humor is generated and interpreted. Interpreting any utterance, whether it is literal or metaphorical, is a procedure of searching for its intended relevance, that is, optimal relevance, which first follows a path of least effort. Expectations of audience can be considered to be of maximal relevance. But expectations usually end up with twists which break the maximal relevance and motivate the search for optimal relevance. The process of deriving a humorous implication starts from the maximal relevance and ends with successfully hunting the optimal relevance. Therefore, the humor producing mechanism is originated from the contrast between the maximal relevance and optimal relevance. The more deepened the gap between the two is, the better humorous effect is likely to be achieved.

Within the relevance-theoretical framework, the audience interpret utterances, assuming that a set of assumptions ostensively communicated provides a good balance of cognitive effects in exchange for the effort which their processing demands, and that this set of assumptions is the one that the humorist presumably intended to communicate. If the utterance is not as informative as required, or seemingly irrelevant, untrue, a search for a more relevant interpretation worth being processed may be activated, despite the supplementary mental effort required. The reward of this extra effort in processing is pleasant surprise and laughter. Humor appreciation requires a context-bound interaction between particular cognitive environments and the skilled humorist...
who manage to predict relevance-seeking cognitive operation in the audience’s mind. There is also one thing unique to the interpretive process of the humor in situation comedies worth noting, that is, while watching situation comedies, the audience hold in their cognitive environment a series of sitcom-specific contextual assumptions which include that as a kind of entertainment TV program, situation comedies are meant to be permeated with humorous games and funny lines and communicators in them all hold a “this-is-play” attitude, and that what is said or is about to be said should never be taken seriously, etc. So when the audience encounter a piece of seemingly irrelevant verbal information, they will set out the optimal relevance seeking process with the sitcom-specific assumptions together with some other relevant assumptions chosen from the immediate physical context or encyclopedic knowledge or other sources. That is a characteristic owing to the particularity of the genre of sitcom.

3. CASE STUDY

**Example 1**

Sheldon: Wo de zing shi Sheldon.
Howard: No, it's “Wo de ming zi shi Sheldon.”
Sheldon: Wo de ming zi shi Sheldon.
Howard: What’s this?
Sheldon: That’s what you did. I assumed as in a number of languages, that the gesture was part of the phrase.
Howard: Well, it’s not.
Sheldon: How am I supposed to know that? As the teacher, it’s your obligation to separate your personal idiosyncrasies from the subject matter.
Howard: You know, I am really glad you decided to learn Mandarin.
Sheldon: Why?
Howard: Once you are fluent, you will have a billion more people to annoy instead of me.

(Combined from Episode 17 in Season 1)

Sheldon suspects that food of poor quality has been served in a Sichuan-food restaurant and wants to counter the Chinese boss, so he decides to learn Mandarin from Howard. When Howard gets annoyed by Sheldon’s typical lengthy criticism about his teaching method, he said, “I am really glad you decided to learn Mandarin.” According to the cognitive principle, upon hearing this, the audience would naturally seek the greatest effect with the smallest effort, that is, the maximal relevance. They would think maybe Howard would proceed to see how useful or what a wonderful experience learning Mandarin is since he says he is glad. Then it turns out the reason for his gladness is that Sheldon would have a billion more people to annoy, which is apparently not true and therefore informational irrelevant. However, according to the communicative principle, every utterance creates a presumption of relevance and the seemingly irrelevant reason should be optimally relevant in this certain context. Then the audience begins to extend the formerly formed contextual assumptions and get the conclusion that Howard is actually protest against Sheldon’s endless and boring criticism. The extra processing on the audience’ part bridges the gap between the maximal relevance and the optimal relevance. Hence, a humor is created and appreciated.

**Example 2**

Leonard: will you please take that stupid hat off.
Howard: no, I want to blend in.
Raj: to what? Toy story?

(Combined from Episode 1 in Season 3)

Since they are in Texas, and a cowboy is stereotyped to be associated with Texas, Howard apparently means that he wants to blend in this place. However, by deliberately dismissing this maximal relevance, Raj mentions the movie Toy Story. In order to get the optimal relevance, the listeners and the audience has to further employ their encyclopedic knowledge: in the movie Toy Story, Detective Woody also wears a similar hat. The extra effort makes them feel more deeply about the ridiculousness of the hat.

**Example 3**

Penny: wait, Sheldon, come back. You forget something.
Sheldon: what?
Penny: this grenade.

(Combined from Episode 7 in Season 1)

Penny is playing video game with Leonard and Sheldon. Sheldon, always confident with his intelligence in playing the game is defeated by Penny, a beginner. When he decides to leave in great embarrassment and frustration, Penny tells him that he forgets something. Sheldon as well as the audience would naturally seek for Penny’s intention with the least effort, assuming that here “something” must be something physical. However, Penny goes on to claim that Sheldon forgets this grenade, which, as a weapon, is impossible to turn up in their apartment. In order to get the optimal relevance, the audience begins to extend the formerly formed contextual assumptions. They would think weapons often appear in games. Here Penny must be making fun of Sheldon about his defeat. The extra efforts in processing the information give rise to humorous effects.

**CONCLUSION**

From the above analysis and case study, we can see it is feasible to apply relevance theory to the study of humor. By this pragmatic and cognitive analyzing method, people will get a deeper understanding of this linguistic phenomenon.
REFERENCES