

# An Analysis of Humor in *The Big Bang Theory* from Pragmatic Perspectives

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**Abstract**—The cooperative principle proposes four maxims in communication. When any of the four maxims is violated or flouted, misunderstanding or implicature, and thus humor might be generated. Humor can also be studied pragmatically within the framework of the relevance theory, which proposes that communication is a process of ostension and inference and differentiates the maximal relevance and optimal relevance. According to RT, humor comes from the contrast between ostension and inference, maximal relevance and optimal relevance. This study attempts to employ theories in these two frameworks to analyze the verbal humor in the Big Bang Theory, so that Chinese audience can have a better understanding of this sitcom.

**Index Terms**—the cooperative principle, the relevance theory, sitcom, the Big Bang Theory, humor

## I. INTRODUCTION

With the progress of globalization, we have easier access to American culture in many aspects, especially from American movies and TV programs of various kinds. Among them, American situation comedy (sitcom) is gaining on popularity.

Situation comedy is a form of TV series, with each episode having fixed actors (actresses) and similar daily scenes. It's mainly shot in studios with the audience in present. In some way, it is similar with drama in that the cast can get feedback in real time through the laughter or other reaction of the audience. Program creator and director will reset the characters, locations, and time of every new episode of each week. From 1940s till now, sitcoms have been popular all over the world. The dialogue of sitcom often shows contradiction with the environment, action and common sense and hence generates humor. Humor, especially verbal humor is the most important feature of sitcoms and also the main mechanism to proceed. As time goes by, this characteristic of sitcoms has not changed.

### A. Research on Humor

As Mark Twin said, humor is mankind's greatest blessing. It can add interesting elements to the topic of communication, bring happiness and pleasant feeling to people, change a person's mood, sooth a sad heart and even construct a way to a happy life. Also humor is specifically divided into visual humor and verbal humor, represented by pictures and actions, funny utterances respectively.

Since humor is playing an important role in human life, a great many scholars have been attracted to explore the mystery of it throughout the history. The field of research range from philosophy, psychology, literature to linguistics.

Among the traditional researches on humor, the Superiority Theory, the Release Theory and the Incongruity Theory are among the most influential ones.

The Superiority Theory can be tracked as far as Thomas Hobbes. He defines humor as "the sudden glory arising from the sudden conception of some eminency in ourselves, by comparison with the infirmity of others." According to Hobbe's view, humor is considered to be an expression of superiority. We laugh at other's misfortune or shortcoming, which reflect our sense of superiority.

The release theory is conducted from the angle of psychology. It points out that laughter is a kind of release from social sanction physically and psychologically. Freud is the main spokesman for the release theory. He held that for some time people long for getting rid of the restraint set by morality, law and some other aspects of human life, back to a stage of being relaxed, free and pleased, not to worry about anything (Freud, 1976). Humor is just right to provide human with such possibility. By enjoying humor, people may release their burden and gain pleasant mood.

Being frequently used, the incongruity theory is one of the most influential approaches in the researches of humor and laughter. The main point in this theory is that "laughter arises from the view of two or more inconsistent, unsuitable or incongruous parts or circumstances, considered as united in one complex object or assemblage." (Attardo, 1997, P.396).

As the linguistic research on humor in modern times develops, both the semantic research and the pragmatic research gain achievements. In the field of semantic study, the Semantic Script Theory of Humor (SSTH), an important theory claimed by Raskin, and the General Theory of Verbal Humor (GTVH), developed by Attardo (1994) gained wide recognition.

"SSHT explains the meaning of every sentence in every context it occurs. The theory recognizes the existence of the

boundary between the knowledge of language and knowledge of the world. As a linguistic theory, SSTH does not account for what's on the other sides of the boundary. However, it pushes the boundary much further out than any other available formal semantic theory." (Raskin, 1985, P.67)

GTVH is developed from SSTH. It includes more linguistic field than SSTH, such as the theory of narrativity and the textual linguistics, by broadening the scope with the logical mechanism, the target, the narrative, the language and the situation.

Besides these three traditional theories and two modern semantic theories, pragmatic approaches are also used to study humor. This paper will conduct humor study within the frameworks two important pragmatic theories, using the dialogue in the Big Bang Theory as a case study.

#### B. A Short Introduction of the Big Bang Theory

*The Big Bang Theory*, one of the most popular sitcoms, has been recently broadcast, and at the same time been introduced into China, which immediately causes a stir especially among young people. Besides enriching our life, the introduction of American sitcoms will also promote our understanding of American culture and help cultivate our interest in English. This paper will try to analyze the verbal humor of the Big Bang Theory from pragmatic perspectives so as to appreciate the language style of this sitcom better.

Set in Pasadena, California, the show is centered on five characters: two roommate geniuses who work at the California Institute of Technology, experimental physicist Leonard Hofstadter and theoretical physicist Sheldon Cooper; their neighbor across the hall Penny, an attractive blonde waitress and aspiring actress; and Leonard and Sheldon's equally geeky and socially awkward co-workers and friends Howard Wolowitz, an aerospace engineer and a non-PhD from JPL, and Rajesh Koothrappali, a particle astrophysicist postdoc also working at Caltech. Leonard and Sheldon are brilliant physicists, the kind of "beautiful minds" that understand how the universe works. But none of that genius helps them interact with people, especially women. All this begins to change when a free-spirited beauty named Penny moves in next door. The geekiness and intellect of the four guys is contrasted for comic effect with Penny's social skills and common sense.

## II. THE COOPERATIVE PRINCIPLE AND THE CREATION OF HUMOR

The Cooperative Principle and its related conversational maxims proposed by H.P. Grice have proved to be one of the most influential theories in the development of pragmatics. Grice's theory is an attempt at explaining how a hearer gets from what is said to what is meant, from the level of expressed meaning to the level of implied meaning. In order to explain the mechanism by which people interpret conversational implicature, in *logic and conversation* Grice (Grice, 1975) introduced four conversational maxims and the Cooperative Principle (CP). The CP runs as follows:

Make your contribution such as required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

The fact that Grice expressed the CP in the imperative mood has led some casual reader of his work to believe that Grice was telling speakers how they ought to behave. What he was actually doing was suggesting that in conversational interaction people work on the assumption that a certain set of rules is in operation, unless they receive indications to the contrary. In *Logic and Conversation*, Grice proposed four maxims, the maxims of Quantity, Quality, Relation and Manner, which were formulated as follows:

Quantity: make your contribution as informative as is required (for the current purpose of the exchange).

Do not make your contribution more informative than is required.

Quality: Do not say what you believe to be false.

Do not say that for which you lack adequate evidence.

Relation: Be relevant.

Manner: Avoid obscurity of expression

Avoid ambiguity

Be brief (avoid unnecessary prolixity).

Be orderly.

The least interesting case is when a speaker observes all the maxims as in the following example:

Example 1

Husband: Where are the car keys?

Wife: They are on the table in the hall.

The wife has answered clearly (Manner), truthfully (Quality), has given just the right amount of information (Quantity) and has directly addressed her husband's goal in asking the question (Relation). She has said precisely what she meant, no more and no less, and has generated no implicature (i.e. there is no distinction to be made here between what she says and what she means, there is no additional level of meaning).

However, there are far more occasions when people fail to observe the maxims, whether by choice or not. Grice classified these non-observances into five groups: flouting a maxim, violating a maxim, infringing a maxim, opting out a maxim, suspending a maxim, based on whether the non-observance is intended to create an implicature or to mislead or not intentional at all. In *the Big Bang Theory* these maxims are either flouted, violated, infringed, opted out or

suspended, so that one remark of humor after another is created. This paper will not differentiate them and use non-observance as the generalized term. Detailed analysis will be made in the following.

#### A. *Non-observances of Maxims of Quality*

Non-observances of maxims of quality occur when the speaker says something which is blankly untrue or for which he or she lacks adequate evidence.

##### Example 2

Sheldon: his name isn't Toby. Toby is an absurd name for a cricket.

Raj: what would you name him?

Sheldon: an appropriate cricket name. For example, Jimmy.

Sheldon and Raj caught a cricket after hard attempts. Raj wanted to name it Toby, but Sheldon did not agree, claiming that "Toby is an absurd name for a cricket." Instead, he proposed Jimmy, obviously without adequate justification. Here, Sheldon generated the conversational implicature that "I am smarter and better informed than you. I should be the person who names the cricket." The audience can feel Sheldon's strong desire to excel others in a humorous way.

##### Example 3

Sheldon: I've never slept on an air mattress before. No lumber support whatsoever.

Howard: Maybe you'd be happier on a park bench.

Sheldon: I don't see any way to get a park bench in here.

Sheldon asked for lodging in Howard's home, but complained there was no lumber support in the air mattress. Of course Howard knew that a park bench is less comfortable and Sheldon would by no means be happier on it. By saying what he believed to be false, Howard implied that Sheldon should stop complaining and be grateful. Unfortunately, the implicature failed to be caught by Sheldon, the nerd who was very poor in personal interaction. Sheldon's awkwardness made a deep impression on the audience and caused a lot of laugh.

##### Example 4

Howard: Look at these women.

Leonard: They are gorgeous.

Sheldon: Oh, wow, nice! Too bad that's a proper noun.

Howard: Oh, look! There's the future Mrs. Wolowitz. No, wait, that's the future Mrs. Wolowitz, with her head in the lap of ..... Oh, what a coincidence! It's the future Mrs. Wolowitz.

Penny couldn't use her own TV for failing to pay her cable bill, so she came to Leonard's home to watch America's Top Model. The four nerds watched this program for the first time and were deeply attracted by all the beauties, especially Howard, who said something obviously untrue. His unusual reaction showed his thirst for beautiful women. What's more, he always thought his words to be humorous and smart, which sounds obscene to a person with common sense.

In the above three examples, non-observance of maxims of quality is employed by the speakers for different reasons. Humorous effects are also naturally achieved.

#### B. *Non-observance of Maxims of Quantity*

The maxims of quantity states that one's contribution should provide sufficient, but not too much information. In the Big Bang theory, the geeky people often provide much more information than enough to be socially appropriate. Their social incapacity often creates surprise for the hearer as well as the audience, and hence, comic effect is produced.

##### Example 5

Penny: you want to know the most pathetic part? Even though I hate his lying, cheating guts...I still love him, is that crazy?

Sheldon: yes.

Leonard: no, it's not crazy. It's uh...uh...it's a paradox. The paradoxes are part of nature...think about light. If you look at Huygens, light is a wave, as confirmed by the double-slit experiment, but then along comes Albert Einstein and discovers that light behave like particles, too.

When Leonard and Sheldon met their new neighbor Penny for the first time, they invited her to dinner. Penny talked about her ex-boyfriend, and could not help crying. Leonard tried to comfort her by talking a lot about abstract science. He provided superfluous information beyond Penny's expectation and puzzled her. The audience laugh at Leonard's nervousness in Penny's presence. The following is one more example with similar comic effects.

##### Example 6

Leonard: So you see, what you are eating is not technically yogurt, because it doesn't have enough live acidophilus cultures.

It's really just ice milk with carrageenan added for thickness.

Penny: Oh, that's very interesting.

Leonard: It's also not pink and has no berries.

Penny: Yeah, but it doesn't really answer my question.

Leonard: What was your question again?

Penny: Do you want some?

Leonard: Oh... Right. No. I'm lactose intolerant. Right. So, gas.

Penny: Yeah, got it.

Besides providing superfluous information, another kind of non-observance occurs when a speaker provides less than enough information.

Example 6

Leonard: I should probably give you a heads up about his mother.

Penny: what about her?

Leonard: she's a delightful woman. You'll love her.

Howard was hurt by Penny's remarks, and refused to show up. However, the other three couldn't take part in the killer-robot competition without him. After much persuasion and pleas from Sheldon, Penny decided to go to Howard's home to apologize. Before Penny's visit, Leonard mentioned Howard's mother without giving adequate information. So when Penny met the old lady in person, the contrast between reality and her imagination shocked her, which in turn created humor.

### C. *Non-observances of Maxims of Relation*

The maxim of relation is exploited by making a response or observation which is very irrelevant to the topic in hand.

Example 7

Penny: So, hey. How are things with you and Leslie?

Leonard: Oh. To be honest, I don't think it's going to work out.

Penny: Oh, that's too bad. Well, hey, don't worry. I'm sure there's someone out there who's just right for you.

Leonard: well, what did she mean by that? Was that just a generic platitude or was that a subtle bid for attention?

Sheldon: you know why this hamburger surpasses the Big Boy? This is a single-decker, whereas the Big Boy is a double-decker. This has a much more satisfying meat-to-bun-to-condiment ratio.

Leonard was not sure whether Penny wanted to attract his attention or simply give a word of comfort and asked for Sheldon's idea. Sheldon gave irrelevant response by explaining why this hamburger surpassed the Big Boy in great length. Here, by flouting the maxim of relation, Sheldon tried to generate the implicature that he had no interest in the question.

### D. *Non-observance of Maxims of Manner*

People may use obscure or disorderly language, whether by choice or not. On such occasions non-observances of maxims of manner may occur.

Example 8

Sheldon: so, Leonard, how goes the mimesis?

Leonard: mimesis?

Sheldon: you know, mimesis, an action in which the mimic takes on the properties of a specific object or organism.

In order to blend into Penny's social circle, Sheldon decided to watch football game with them, which he had no interest and was by no means good at. In order not to embarrass Leonard, Sheldon asked him about the situation in a very indirect way. However, the language was too obscure to be understood and had to be further explained. Here, the humor comes from the even greater embarrassment. Sheldon often made such funny mistakes for he was eager to show off his profound knowledge.

Example 9

Penny: So I've known for a while now that Leonard has had a little crush on me...

Sheldon: A little crush? Well, I suppose so, in the same way Menelaus had a little crush on Helen of Troy.

Sheldon thought Penny had understated Leonard's infatuation with her. Instead of pointing it out directly, he compared Leonard's infatuation with Penny to that of Menelaus with Helen, attempting to be humorous and learned. And once again, he failed to get his idea across.

Inevitably, there are a number of problems and limitations associated with Grice's theory. For example, Different maxims seem to be different in nature, and they may overlap and difficult to distinguish from each other.

## III. RELEVANCE THEORY AND THE CREATION OF HUMOR

### A. *Ostensive-inferential Communication*

According to the view of Sperber and Wilson (1995), 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". 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.

Example 10

Sheldon: So if a photon is directed through a plane with two slits in it and either slit is observed, it will not go through both slits. If it's unobserved, it will. However, if it's observed after it left the plane but before it hits its target, it won't have gone through both slits.

Leonard: Agreed. What's your point?

Sheldon: there's no point, I just think it's a good idea for a T-shirt.

In the conversation, Sheldon took three different conditions into account and accordingly made three statements on the relation between a photon and a plane. The language was detailed and professional and the thinking process was logical and comprehensive so that Leonard would naturally infer that Sheldon must have had something relevant to academy to deduce. However it turned out his point was just about such a trivial thing as a T-shirt. The conflict between Sheldon's ostension and the inference by Leonard as well as the audience gives rise to the humorous effect.

*B. Maximal Relevance and Optimal Relevance*

According to Sperber and Wilson (1995), every aspect of communication and cognition is governed by the search for relevance. 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. Second, the Communicative Principle: every act of ostensive communication communicates a presumption of its own optimal relevance. 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. 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.

Example 11

Sheldon: I need access to the Cheesecake Factory's walk-in freezer.

Penny: Now, honey, I already told you, the hamburger meat is fresh and stored at a safe temperature.

Sheldon: No. This is to train for a three-month expedition to the magnetic North Pole.

Penny: What?

Sheldon: I don't know how that sentence could possibly confuse you...but to elaborate...

Sheldon asked Penny for a walk-in freezer to get training under very low temperature before departing for the North Pole. When Penny realized his intention, she got surprised and uttered a word "what" which is misunderstood by Sheldon. In daily life, the word "what" are often used to mean "what is it" or "I am surprised". With his poor communicating skill, Sheldon naturally considers "what is it" to be the meaning of "what" by paying the least effort. The contrast between maximal relevance and optimal relevance brings about the humorous effect.

Example 12

Penny: Yes. I can't get my stupid door open.

Sheldon: You appear to have put your car key in the door lock-- are you aware of that?

Penny: Yeah.

Sheldon: All right, then.

Penny: Damn it, damn it, damn it, damn it, damn it!

Sheldon: Would it be possible for you to do this a little more quietly?

Penny: I can't get the damn key out.

Sheldon: Well, it's not surprising-- that Baldwin lock on your door uses traditional edge-mounted cylinders, whereas the key for your Volkswagen uses a center cylinder system.

Penny: Thank you, Sheldon.

Sheldon: You're welcome. Why did you put your car key in the door lock?

Penny: Why? I'll tell you why-- because today I had an audition. It took me two hours to get there, I waited an hour for my turn, and before I could even start they told me I looked too Midwest for the part. Too Midwest--what the hell does that even mean?

Sheldon: Well, the American Midwest was mostly settled by Scandinavian and Germanic people. They have a characteristic facial bone structure...

Penny: I know what it means, Sheldon! God! You know, I have been in L.A. for almost two years now, and I haven't gotten a single acting job. I've accomplished nothing, haven't gotten a raise at work, haven't even had sex in six months, And just now, when I was walking up those stairs, a fly flew in my mouth and I ate it!

Sheldon: Well, actually, insects are a dietary staple in many cultures. They're almost pure protein.

Penny: Oh, son of a bitch!

Sheldon: I believe the condensation on your frozen foods weakened the structural integrity of the bag. But returning to your key conundrum, perhaps you should call a locksmith and have him open the door for you.

Penny: I did. He said he'll get here when he gets here.

Sheldon: And you're frustrated because he phrased his reply in the form of a meaningless tautology?

Penny: No! I am frustrated because I am a failure at everything and my breath smells like fly.

Penny was frustrated for her failure in the audition. When she complained to Sheldon, she didn't expect literal explanation for all the confusion. Sheldon knew little of human emotion, and he took every word literally. The contradiction between the maximal relevance related to Sheldon and the optimal relevance related to Penny make the audience laugh and Penny even more frustrated. This dialogue can also be interpreted from the perspective of the cooperative principle. For example, by unnecessarily explaining the meaning of Midwest in too much detail, Sheldon violated the principle of quantity. While in response to Sheldon's question why she put her car key in the door lock, Penny flouted the principle of relevance.

#### IV. ENDING

In this paper, the verbal humor in *the Big Bang Theory* is analyzed within the framework of the cooperative principle and the relevance theory, which prove to be very efficient in explaining the creation of comic effects. This analysis is hoped to help with people's appreciation as well as creation of humor.

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