



Subtitle Translation from the Perspective of Multimodal Discourse Analysis: A Case Study of The Big Bang Theory

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Received: 07 Nov 2022; Received in revised form: 18 Nov 2022; Accepted: 19 Nov 2022; Available online: 30 Nov 2022

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Abstract— This paper, taking the subtitle translation of an American comedy *The Big Bang Theory* as the object of the study, selects the subtitle translations of some typical clips. Based on the integrated framework of multimodal discourse analysis proposed by Professor Zhang Delu, the subtitle translation is analyzed from four levels including culture, context, content, and expression. This paper concludes that multiple modalities interact each other in complementary ways. The interactions between multiple modalities help viewers better understand subtitle translation. Subtitle translation, together with other modalities, helps viewers grasp the plot of the TV series. The author hopes that this study can provide some reference for subtitle translators.

Keywords— subtitle translation, *The Big Bang Theory*, the integrated framework of multimodal discourse analysis, multiple modalities.

I. INTRODUCTION

The multimodal discourse analysis that emerged in the West in the 1990s overcame the limitation of discourse analysis focusing only on the linguistic level. Like language, other semiotic systems including images, sound, technologies, and colors also have communicative meaning. The research of multimodal discourse analysis is still expanding. It's acknowledged that films and TV series are artistic manifestations that integrate multimodalities such as language, visual modalities, and auditory modalities. While movies and TV series are the bridge for us to comprehend the culture of the Western world. Subtitle translation represents a bridge for intercultural communication. Many excellent foreign TV series have received much attention in China, which can be attributed to subtitle translation. The analysis of subtitle translation of the *Big Bang Theory*① from the perspective of multimodal discourse analysis can bring a new research perspective for subtitle translation studies and provide some reference for subtitle translators.

II. THE DEFINITION AND THEORETICAL

Framework of Multimodal Discourse Analysis

Zellig Sabbettai Harris, a famous American linguist, published his paper *Discourse Analysis* in 1952. Until now, it has been 70 years since discourse analysis was put forward. It can be said that discourse analysis is closely related to linguistics and profoundly influenced by linguistics. After the emergence of the concept of discourse analysis, various theories and methods of discourse analysis have been proposed. However, the objects of all these studies focus on the linguistic level itself. Multimodal discourse analysis can help to fill these gaps to a certain extent. For Zhu Yongsheng, modality refers to the channels and media of communication, including language, technologies, images, colors, music, and other semiotic systems. Multimodal discourse analysis emerged in the 1990s, and the main theoretical basis of it is the system-functional linguistics proposed by Halliday, which points out that language is a social symbol with ideational metafunction, interpersonal metafunction, and textual metafunction. After the research of over ten years, multimodal analysis has expanded beyond linguistics to many fields including semiology, philosophy, sociology,

anthropology, politics, journalism, psychology, law, aesthetics, and medicine. The research objects have been extended from linguistic words to a variety of social symbol systems such as music, pictures, images, web design, and architectural styles. (Zhu Yongsheng, 2007)

In the 1990s, international linguistic scholars began to study multimodal discourse. Kress & Leeuwen established a multimodal discourse analysis framework with image analysis based on Halliday's functional grammar theory from the perspective of social semiotics, which mainly analyzes the role of images, sound, and colors in the discourse. (Xu Xiaocui, 2019) In terms of domestic research, the study of multimodal discourse is later than that in foreign countries. In 2003, Professor Li Zhanzi became the first person to conduct domestic research on multimodal discourse analysis, whose article *Social Semiotics Analysis of Multimodal Discourse* explored the framework of multimodal discourse analysis based on systemic-functional linguistics and analyzed the pedagogical significance of multimodal discourse analysis. Domestic scholars have conducted abundant researches on the issue. Therefore, domestic research has achieved fruitful results in multimodal discourse analysis. And the research results can be divided into four aspects including theoretical research, applied researches, pedagogical application research, and research on the construction of the metaphorical meaning of multimodal discourse.

According to Professor Zhang Delu, communication is no longer carried out by virtue of one sense organ. The realization of communication involves auditory, visual, and tactile systems. The discourse produced in this communicative way is multimodal discourse. (Zhang Delu, 2009) Based on the theory of systemic-functional linguistics, he established the integrated framework of multimodal discourse analysis, which consists of four main aspects: cultural level, contextual level, content level, and expression level.

Cultural level: According to the integrated framework of multimodal discourse analysis, the cultural level is the key to the realization of multimodal communication. The cultural level is made up of ideology consisting of thinking patterns, philosophy of living, habits of living, and all the rules of the society, as well as the communicative procedures and others that help realize the ideology. (Zhang Delu, 2009)

Contextual level: at the contextual level, communication is subject to the contextual level. The scope of the discourse, the tone of the discourse, and the manner of the discourse are critical contextual factors. (Zhang Delu, 2009)

Content level: The content level consists of two parts: the discourse meaning level and the form level. Apart from

including conceptual meaning, interpersonal meaning, and text meaning which are restricted by different contextual factors. It also includes different formal systems that embody the meaning of discourse, such as language, graphic system, acoustic system, sensory system, and others. There are coordinated and complementary relationships between different formal systems. (Zhang Delu, 2009)

Expressive level: The expressive level refers to the form of expressing discourse in the real world, which includes two categories: linguistic and non-linguistic forms. Linguistic ones include both language itself and other symbols accompanying language during the process of communication; non-linguistic ones include both body language and other forms of language. (Zhang Delu, 2009)

III. SUBTITLE TRANSLATION STUDY

Unlike literature, first and foremost, movies and TV series are the art of images. Another difference differing film and television shows from literary works such as novels is that they are also the art of sound. (Zhang Chunbai, 1998) Unlike written literary language, the language of film and television shows is characterized by its listening, comprehensiveness, instantaneousness, popularity, and non-notation. (Qian Shaochang, 2000) The above characteristics of language of films and television shows determine the uniqueness of film and TV series translation. And different translation strategies and methods should be adopted. Subtitle translation is a very important component of film and television translation, which is worthy of our exploration and research. Subtitle translation can help our domestic movies and TV series further spread to the European and American world. In the mean time, it can also help us absorb and understand the excellent culture of movies and TV series from western countries. It can be said that subtitle translation is a bridge for cultural communication. The definition of subtitle translation proposed by Danish translator Henrik-Gottlieb is relatively complete and scientific. He defines subtitle translation as "the translation of the oral or written source text of audiovisual products into a written target text and its addition to the original text image at the bottom of the screen" (Gottlieb, 1992).

According to the way the information is conveyed, Subtitling is a type of translation activity. And there are two types of subtitles: intralingual subtitles and interlingual subtitles. According to Interlingual translation, while preserving the original sound of the film and TV series, translators convert the source language into the target language, which is commonly referred to as subtitle

translation. The translation version is put on the bottom of the screen. (Li Yunxing, 2001)

According to the survey, the first Western research on subtitle translation was Dollerup's article *On Subtitles in Television Programmes* published in *Babel* in 1974 (Kang Le, 2007). Through literature review, the study of subtitle translation in China is later than that in the West. since Li Yunxing published his article *Strategies of Subtitle Translation* in 1974, which opened the chapter to the study of subtitle translation. Since then, scholars have conducted multidimensional studies on subtitle translation and fruitful results have been achieved. Some scholars have explored subtitle translation from some theoretical perspective while others have discussed the principles and techniques of subtitle translation.

IV. THE INTRODUCTION OF THE BIG BANG THEORY

American series *The Big Bang Theory* is a hit that has gained A high audience rating in China. Since it was broadcast in 2007, the show has contained 12 seasons. The *Big Bang Theory* has been a big success in China in addition to being known locally. This cannot be achieved without subtitle translation, Its subtitle translation also provides a basis for translation researchers. The series, which is set at the California Institute of Technology in Pasadena, California, features a number of intriguing stories centered around four scientists and a stunning girl who lives next door. Sheldon, Leonard, Howard, and Rajesh are the names of these four characters. They are colleagues working at the same school with Howard being an engineer and another three being physicists, as well as close friends with the same hobbies in their private life. Because they are all fond of comics and computer games. Interesting stories happened between them and the neighbor Penny, an intelligent woman with a high emotional quotient.

The show is about work and life, friendship and love. Additionally, we can also comprehend how various civilizations interact with each other. The fact that Rajesh is from India also adds exotic features to the small group. All the protagonists have special qualities and unique personalities that they are eager to display. The overall language style of the play is humorous. The subtitle translation shows that the translator has fully considered culture, context, content, and expression during the translation process. From the perspective of multimodal discourse analysis, the series presents the audience with vivid and touching stories by virtue of language, visual modality, and auditory modality.

V. A CASE STUDY OF SUBTITLE TRANSLATION OF THE BIG BANG THEORY

5.1 Cultural Level

Professor Zhang Delu believes that the cultural level is an important aspect of multimodal communication, including the ideology consisting of thinking patterns, philosophy of living, habits of living, and all the rules of society, as well as the communicative procedures or others that help realize this ideology. (Zhang Delu, 2009) Culture is derived from social reality. China and the United States differ in the political landscape and economic growth significantly. The two nations' cultures are different from one another. Some cultures familiar to audiences in Western countries may be unfamiliar to Chinese people. Therefore, when translating, translators should take into account the differences between Chinese and Western cultures and consider the cognitive ability and acceptability of the target language readers during the translation process. In order to better realize the cross-cultural communication of subtitle translation, translators also need to pay attention to cultural elements in addition to adopting specific translation strategies and translation methods.

Example:

Sheldon: What are you doing here?

Mrs Cooper: Lenard called, and he said that you were pining for a young lady.

Sheldon: Oh, that's preposterous.

Mrs Cooper: Oh, lambchop, we can quibble what to call it, but I think we can agree it's creepy.

This scene takes place in the S04E03. Sheldon feels depressed after Sheldon and Amy split up. But he doesn't believe he has split up and started keeping cats. A group of them are eventually raised by him, and he gives them Jewish names. His roommate Leonard was so worried that he called Sheldon's mother who was far away in Texas, asking her to come over. Sheldon and his mother were speaking during the conversation. Mary said "he said you were pining for a young lady", "pin" literally means "to make someone unable to move by putting a lot of pressure or weight on them".

If the translator translates literally, the reader will not understand what she is saying. Taking into account the Chinese culture, the translator translates it as “为伊人消得人憔悴”. The phrase “为伊人伊消得人憔悴” is a familiar expression in Chinese culture. The expression is taken from a famous passage by Northern Song Dynasty poet Liu Yong that describes the sadness of missing a loved one. The play's narrative states that Sheldon is devastated

by the split. It is a spooky situation based on Sheldon's peculiar behavior and the video's pictures. Watching the visual modality including the images and sound, the auditory modality, and this subtitle translation, the reader will better appreciate the meaning of the sentence in the original text. On a cultural level, the subtitle translation accurately conveys the most effective message to the audience in a particular cultural context, allowing the target readers to better understand and appreciate it.

5.2 Contextual level

At the contextual level, Professor Zhang Delu argues that communication is subject to the contextual level. The contextual factors are determined by the scope of discourse, the tone of discourse, and the ways of discourse. (Zhang Delu, 2009) The television series *The Big Bang Theory* is broad multimodal communicative scenes in which communicative manners are performed in particular settings. The emotion of the characters can be observed through their tones, expressions, and ways of speaking in the drama. The audience can obtain some communicative information from visual and auditory modalities. When translators engage in subtitle translation, they should conform to the context so that they can precisely describe their characteristics such as characters' feelings and states of mind.

Example:

Leonard: I don't want it better.

Sheldon: Well, that speaks volumes, doesn't it? All right, I suppose I'll go put on my bus pants.

Leonard: What the hell are bus pants?

Sheldon: They are pants one wears over one's regular pants when one sits on bus seats that other people have previously sat on. But perhaps from your lofty heights atop the corporate ladder, you've lost touch with the struggles of the common man.

Leonard: Look, I'm still happy to drive you to work. We're still friends.

Sheldon: Except you identified me, your best friend, as a gangrenous limb that needed to be severed from the organism and tossed away. The desperate act of a little man with a big Napoleon complex.

Leonard: You know what? Go put on your bus pants.

The episode is from S04E12. According to the integrated framework of multimodal discourse analysis, at the contextual level, Sheldon is angry with Leonard because of the last cooperation over the project. Thus he kept making the project better. In fact he was fired by Leonard who refuses to adopt Sheldon's strategies. Sheldon completely annoys Leonard. The original expression was translated

into "公交裤是什么玩意". Leonard's tone of voice and facial expression show that Leonard was quite angry and looked back at Sheldon hopelessly. The visual modalities of the video, the character's actions, and the characters' tone of voice mix together. The translation "公交裤是什么玩意" perfectly conforms to the communicative context of the play.

5.3 Content level

At the content level, according to Zhang Delu (2009), the content level consists of two parts: the discourse meaning level and the form level. The content level incorporates both conceptual meaning, interpersonal meaning, and text meaning subject to distinctive contextual factors and different formal systems that embody the meaning of discourse such as language, graphic system, acoustic system, and sensory system. Additionally, there are links between various formal systems that are coordinated and complementary.

Example:

Leonard: So, if any of you are considering going into experimental physics, my door is always open. Once again, I'm sorry that the demonstration didn't quite work out, but now we know what happens when you accidentally spill peach Snapple into a helium-neon laser. And now to tell you about the theoretical physics department is Dr. Sheldon Cooper.

Sheldon (off): Forget it.

Sheldon, we both agreed to do this.

Sheldon (off): It's a waste of time. I might as well explain the laws of thermodynamics to a bunch of labradoodles.

The scene is from the E6S2, and Sheldon is adamantly opposed to instructing the physics students. He thus prefers to remain hidden. The episode's context is that Sheldon is compelled to instruct the physics students. Sheldon's refusal to impart knowledge is the message being sent in this exchange. The main character's acts in the series and hesitant tone of voice work well together and inject the play with a lot of humor. The translator should take into account the formal system of expressing different discourse meanings during the translation process, so as to show the main character's attitude. The subtitle translation team gives a simple and easy translation "我还不如给一群拉布拉多狗讲热力学定律呢", which complements other modalities. The audience can understand more clearly and appreciate the main character's discontented attitude at this moment.

5.4 Expression level

The expression level consists of linguistic and non-linguistic categories, as can be observed from the

integrated multimodal discourse analysis framework. Linguistic ones include both language itself and other symbols accompanying language during the process of communication; non-linguistic expressions include both physical and non-physical ones. The physical expressions include factors such as facial expressions, gestures, and movements; the non-physical ones include PPT, laboratories, online platforms, physical objects, sound, and booths for simultaneous interpretation and others. (Zhang Delu, 2009) The TV series The Big Bang Theory presents viewers with a rich variety of multimodal forms. In addition to pure language, non-verbal systems also have an influence on subtitle translation, such as facial expressions, gestures, actions, and environmental features. They constitute communicative meaning. In the process of source-to-target language conversion, subtitle translators should take into full consideration the factors of intonation, tone, facial expressions, gestures, movements, and the layout of screen space and other media features that complement the communicative message.

The title of the series is The Big Bang Theory, which literally means “大爆炸理论”. The title can be referred to as modern cosmology. By watching the show's poster, the main characters are seen eating and chatting in the living room. And the show mainly depicts the lives of the main characters. According to the introduction of the plot, it revolves around the occurrence of interesting stories that happen among them. Therefore, the translation of “生活大爆炸” is a pun, embodying a very accurate understanding that achieves linguistic equivalence and conforms with the message conveyed by other modalities such as images and music.

In The Big Bang Theory, the English and Chinese subtitles are presented at the bottom of the screen with English at the bottom and Chinese at the top. This takes into account the audience's habits. The subtitle translation must appear at the same time like source language and the subtitles must stay long enough for the viewer to read the information. Typically, English subtitles should be limited to a maximum of two lines; Chinese subtitles should not exceed one line at most. Sometimes subtitle translations are constrained by limited space, so at the expression level, the translators add some background knowledge of some expressions by placing them on top of the screen. This allows the information to be conveyed within a specific time limit and also helps the reader to understand.

Example:

Raj: So then, I went to Cambridge, which was wonderful.

Not only because it's a good school.

But because it totally looks like Hogwarts.

That's where I fell in love with astronomy.

The episode is from E17S06. When Raj makes acquaintance with Lucy. They go to the coffee shop for chatting. Apparently, Raj is introducing himself to Lucy. When talking about the university he attended. He said: “But because it totally looks like Hogwarts”. The sentence was translated into “是因为那里看起来超像霍格沃茨的呢”. In addition, additional background information “小说《哈利波特》中主角们就读的学校” was put at the top of the screen. Considering space limitation, the method is feasible.

Example:

And, oh, yes, In a moment filled with biblical resonance, pride went before my fall,

Causing my Flash 123 to go with to Wolowitz.

The scene is from the E02S03.TV series integrate various modalities. people can get part of the information from visual and other modal systems. Because subtitle translation is limited by spatial factors, translators can adopt more concise and simple words, such as idioms during the translation process. These cultural words have been refined over thousands of years. In this context, Sheldon and Howard disagree over the name of an insect and they start a cricket bet. It turns out that Sheldon loses. The video shows Sheldon's facial expressions and movements. “Biblical resonance” refers to “圣经的，与圣经相关的”. In the west, people regard the Bible as a book of wisdom. The translator translates it as “在一个充满了醍醐灌顶的时刻，所谓骄兵必败”. In Chinese culture, Buddhists use the metaphor “醍醐灌顶” to express wisdom. With wisdom, people can be enlightened and completely awakened. It can be said that the subtitle translation is as good as the original text. Moreover, this expression is simple and easy to understand, conveying the meaning of discourse in the episode accurately, which can help the audience to grasp the plot quickly.

VI. SUMMARY

The meaning of the overall discourse is composed of multiple modalities, such as language, visual system, and auditory system. In the process of multimodal discourse translation, it is sometimes difficult for one modality to fully convey the meaning of the discourse. And multiple modalities interact with each other to form the overall meaning of the discourse. Based on the integrated framework of multimodal discourse analysis proposed by Professor Zhang Delu, this paper adopts the method of case study analysis to explore the subtitle translation of The Big Bang Theory at the cultural, contextual, content,

and expression levels. The paper finds that the subtitle translation of the TV series is influenced by modalities such as language, images, sound, and colors, and also collaborates with these factors to convey accurate and adequate communicative messages to the audience. The author hopes that this study will help Chinese viewers better appreciate and comprehend the TV show and provide references for Subtitle translators

Notes:

- ① The subtitle translation is from Youku's official subtitle

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