

Designing laughter: Classification and analysis of generation factors of 'laughter' in US-China Sitcom programmes

Yoshimatsu, Takashi^{*a}; Ikeda, MInako^b;

^a Doctoral Programme, Kyushu University, Fukuoka, Japan

^b Kyushu University, Fukuoka, Fukuoka, Japan

* yoshimatsu.takashi.553@s.kyushu-u.ac.jp

Making 'laughter' artificially in the television programme industry will lead to construct the ground of laughter. It might be useful in the television industry to explore the structure of laughter generation factors by choosing up a representative sitcom comedy programme from the two largest linguistic and cultural spheres, the United States and China, because the TV production costs tends to become expensive with costs such as large-scale sets, using foreign locations and computer graphics. In this paper, I would like to pick up two popular latest series. In addition to the scripts and cultural differences in the sitcom in both countries, combining what kind of conversation and character and looking at by what method laughter would be generated by grasping the essence of the programmes. Sitcom comedy is a relatively simple production method, making everyday conversation to be funny and turning it into a show. I would like to proceed with this research by counting the number of classified factors and comparing the incidence ratios of each item, to clarify the differences in characteristics in programmes of the US and China, from the aspects of industrial structure and linguistic factors of each country. Through this research, I will analyse laughter in sitcom comedies from multiple angles.

Keywords: *sitcom comedy , media, classification, TV programme*

1 Background and Purpose

The goal of this paper lies in presenting the commonalities and differences between the US and China in sitcom comedy programmes, by classifying and analysing the script with the technique of laughter designing. It might be possible to clarify the difference of laughter due to the distinct linguistic characteristics of English and Chinese, and the difference of social background and to utilise the knowledge gained effectively. The US and China have a strong influence, both as linguistic areas and as television programme production market areas, so it can be expected that the classification and analysis of sitcoms would bring benefits to the television industry. In the US, methods and research to analyse sitcom comedies are made in such a way that it shows a relation to social background. In China, there are also studies that compare US and Chinese programmes. From reviewing these studies, it could be said that sitcom programmes in the US and China have already taken root as research subjects. According to Berger's (1993) classification and other previous theories on humour, there

remain elements that could not be explained about the laughter that occurs in the sitcom comedy programmes, and I thought it could be identified by performing text analysis of major programmes of the US and China in detail. Also, from the study of Amemiya (2016) and Ong (1982), it is assumed that laughter in sitcom comedy is also affected by linguistic characteristics and the industrial structure of the television industry. By analysing the programmes, it is considered that the difference in how to make laughter due to the difference in each language sphere can be extracted.

The influential TV sitcom *Big Bang Theory* in the United States is still being broadcast (even in 2019). *Aiqing Gongyu* (爱情公寓) has been broadcast over the long term throughout China. Analysing representative programmes and categorising the process of 'laughter' inductively in the U.S and China could be meaningful to the TV industry.

2 Literature Review

Burger (1993) analyses humour techniques in various media and classifies them into 45 types. There are (a) three types of actions (physical and non-verbal humour), (b) 14 types of natures (existential humour), (c) 13 kinds of logics (humour assembled in idea) and (d) 15 kinds of languages (humour of language).

Ong (1982) classified languages as 'primary orality' and 'secondary orality' and analysed transmissibility, 'primary orality' is a character based on words as voices who do not know anything about writing or printing things, and the character of 'secondary orality' can be transmitted by documents that can be passed down in writing.

Amemiya (2016) extended Ong's discourse and noted that in Western Europe, people are using phonograms and there are also premises that even intellectual documents are read aloud, Japanese language is having most complex notation system in the world using three kinds of letters, the correspondence between letters and sounds is extremely weak. The intellectual discourse stops in the category of written letters since Buddhist scriptures and Chinese classics. They weren't expanded as culture of voice. Also, several mainstream theories exist as a prior study for interpreting humour and laughter. The theories to analyse the mechanism of laughter, by philosophers such as Kant and Schopenhauer, have been constructed and built on the basis of the academic fields of philosophy and psychology. When humour analysis is limited to 'analysis of comedy programme', the concepts of 'superiority theory', 'energy theory' and 'incongruity theory' can be adopted as a rough classification. Furthermore, in addition to those theories, it might be useful to use 'relevance theory' of the linguistics field, as a method in the sitcom comedy programme based on 'multiplication of communication words'. Combining these four theories makes it possible to analyse the method of designing laughter in comedy programmes from a wide range of approaches.

On the other hand, if the above four theories are applied to the analysis of comedy programs, the three kinds of humour theory can, basically, analyse laughter which occurs in the structure of 'one (person) to one' and 'one to the public'. But it could not cover the analysis of laughter which occurs in the structure of 'programme producer to programme viewer'. Although 'relevance theory' also explains the laughter caused by the misalignment that occurs in parts, there remains a point that could not be explained with respect to the laughter that occurs in the programme.

The article by Takagi (2018) analysed the laugh of the U.S programme (*I love Lucy*: 1951-1957) and discussed the 'handcuffs gag' in the 1950s, but she mainly focussed on 'action'

that forms a comedy, she did not mention linguistic issues and research on current social background so much. Nakamura's (2018) paper analyses the mechanism of the brain that recognises laughter (especially 'incongruity'), but did not cover the mechanism affecting TV viewers of comedy programmes. Therefore, while starting from the four theories, this paper adds a new viewpoint useful for the analysis of sitcom comedy programmes and the analysis of sitcoms and the development of comedy programmes.

3 Research methods

As a research method, the process is as follows: (1) Writing a programme script of Big Bang Theory in the U.S and Aiqing Gongyu in China. (2) Creating scripts in English and Chinese. (3) Recording the occurrence of 'laughter' (laugh track) together with the time code. (4) Recording the video effects such as 'slow motion', 'pan up' edits in the programme. (5) Based on the previous research and creating the item description of laughter, classifying factors of laughter of each place. Classification is arranged by major classification, small classification and hierarchy. (6) Counting the number of classified factors and comparing the incidence ratios of each item, to clarify the differences in characteristics in programmes of the US and China, from the aspects of industrial structure and linguistic factors of each country. (7) Analysing laughter in sitcom comedies from multiple angles. (8) Presenting the commonality and difference between US and Chinese programmes on laughter designing.

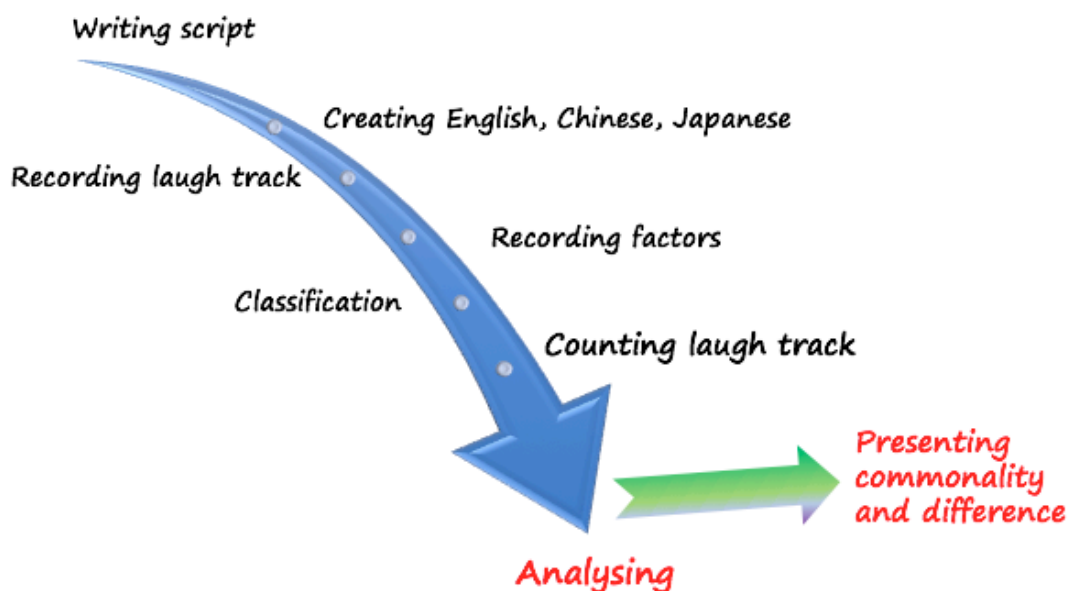


Figure1. Research methods

The transcription of Big Bang Theory includes Episode 1(22 minutes and 22 seconds), Episode 2 (20 minutes and 35 seconds), from Season 1; Aiqing Gongyu uses Episode 1 of Season 1 (43 minutes 34 seconds). Big Bang Theory adds English script and Japanese translation (by using hulu internet platform). In Aiqing Gongyu, this research will prepare the Chinese script (through the youtube platform) and Japanese translation (my own work) as necessary.

4 Research Context and Process

4.1 Classification of causes of sitcom comedy programme laughter

In addition to examining the four theories, this research has written a script of each programme in the US and China and analysed the cause of laughter. As a premise of the preliminary stage of classification, the laughter of comedy programmes might be considered to be caused by factors at 'setting level', 'linguistic level' and 'behaviour level'.

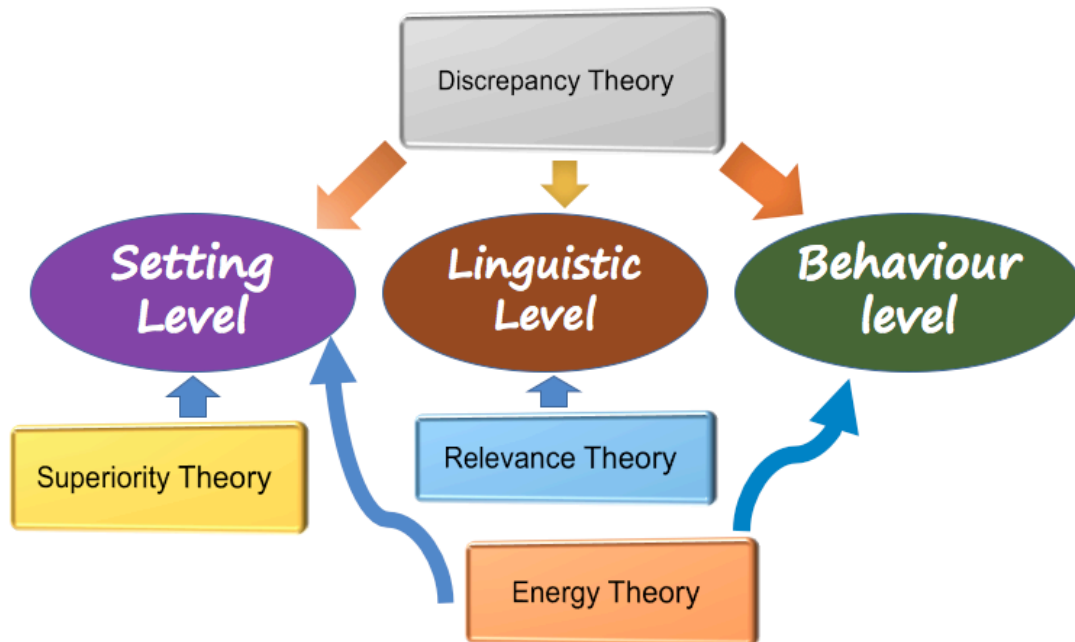


Figure2. The relevance between 'three levels' and 'previous four theories'

4.2 Examination of Language, Setting, and Behaviour factors

'Setting level' is what makes laughter as 'setting' of characters and scenarios. It depends on situations, and also on the composition of the world view of the programmes and composition. 'Language level' refers to laughter which is borne out of conversation among characters. It is a laugh made by a combination of words. 'Relevance theory' can be applied to this language level laughter. Laughter at the 'behaviour level' refers to laughter which is borne out of the character's 'funniness of movement'. *Charlie Chaplin* (products: 1914-1967), *Buster Keaton* (products: 1917-1967) in the silent movie era are remarkable examples. In addition to the setting level, the prominent comedy in Britain the UK, *Mr. Bean* (TV series: 1990-1995) also has laughter in Bean's behaviour itself. Each level is difficult to completely separate, and there are scenes where there are mixed levels.

4.3 Major classification of generation factors

As a result of analysing prior research on scripts and humour of both sitcom programmes and focusing on factors such as setting, language and behaviour, the following classification could be shown. I would like to present (A) - (H) as a major classification.

(A) Incongruity. It is an action which is out of character for an adult, behaving childishly and mistakes caused by immaturity as a human being. (B) Mixture of real and imaginary things. True build-up based on fictions such as delusions, fantasies, assumptions. Fictions piled upon fictions on the premise of reality. (C) Energy Transferring. From tension to relief and

from relief to tension. Energy transferring 'from tension to relief' is a general direction in energy theory. But the direction 'from relief to tension' such as 'situation into awkward silence', 'situation into police matter', 'situation into food allergy' 'situation into loss of expensive things' also leads to generate laughter at sitcoms. (D) Discrepancy between implicature and explicature. Misinterpretation between the speaker and the listener. (E) Sound factors. Linguistics, phonology, higher and lower voice. (F) Recognition of congenital differences, attribute differences. (G) Change in framing. Things that make viewers laugh by changing the view and angle of things. (H) Others.

4.4 Small classification of generation factors

I have classified the major classifications (A) - (H) more inductively while viewing each programme and examining factors of laughter designing. The classified factors are listed below.

Table1. Small classification of generation factors

A Incongruity	A1	Gullibility
	A2	Missing ability to read the mood
	A3	Innocent abnormality
	A4	Reckless to say easily that it can't be impossible
	A5	Strange commitment of specific characters
	A6	Betrayal of promises
	A7	Evoking jealousy
	A8	Loudly speaks without caring about surroundings
	A9	Concentrating something with enthusiasm
	A10	Strange clothes
	A11	Behavior in inappropriate time zone
	A12	Stingy behaviors
	A13	Brainless
	A14	Acting fast or slowly, repeating longly
	A15	Declaring with confidence, but wrong guessing
	A16	Horny. Dirty joke.
	A17	Mistake, acceptance of mistake
	A18	Lack of flexibility

B	B1a	Speech for something that is regarded as justice for the general public
	B1b	Insertion of real things into conversation
Mixture of real and imaginary things	B2	Contradiction
	B3	Exaggeration
	B4	Logic to justify strange commitment
	B5	Serious discussion on fiction
	B6	Complex explanation derived from new knowledge
	B7	As a result it was a dream
	B8	Seriously receiving lies
	B9	Laying a lie
	B10	Lie is revealed

C	C1	Accidentally wig come off
	C2	Attitude change
Energy Transferring	C3	Change of appearance on drinking alcohol
	C4	Failure of trick
	C5	Strange behavior
	C6	Awkward for no reason
	C7	Deformation of face from food allergy
	C8	Lost expensive items
	C9	Situation into police matter
	C10	Unexpectedly serious, tragedy, furious. Unexpected reaction
	C11	Abbreviation of process

D	D1	Misunderstanding
	D2	Extended interpretation
Discrepancy between implicature and explicature	D3	Boasting
	D4	Militant question
	D5	Answer with high versatility
	D6	Unnatural metaphor, unnatural illustration
	D7	Originally should be interpreted through implicature, but though explicature
	D8	Explicature is ordinary, but guess is dirty
	D9	The difference between true intention and public stance
	D10	Roundabout rephrasing
	D11	Pointing out strange reality, pointing out mistakes
	D12	Detour

E	E1	Rhyming
	E2	Tongue twister
Sound factors	E3	Homonyms, mistakes with similar sounds
	E4	Impersonation
	E5	Higher and lower voice
	E6	Impact of word itself

F	F1	Ethnic
	F2	Disabled person, sick
Recognition of congenital differences, attribute differences	F3	Not understanding own culture or other cultures

G	G1	Unexpected event against arrangement
	G2	Strange, abrupt behaviour at the beginning of the scene
Change in framing	G3	Abrupt topics, abrupt remarks, abrupt turning
	G4	Reversal of position

H	H1	Demonstrated from performance
	H2	Visual effect
others		

(A) Incongruity. This is related to mismatch and classified into 18 items from A1 to A18, such as gullibility, missing ability to read the mood, innocent abnormality. This item is mainly affected by ‘discrepancy theory’. Hurley (2011) showed energy theory, discrepancy theory and superiority theory.

(B) Mixture of real and imaginary things. This item occurs in ‘between reality and fiction’ and was classified as B1 to B10 such as contradiction, exaggeration, logic to justify strange commitment.

(C) Energy Transferring. This item occurs in ‘energy transfer’ and was classified from C1 to C11 such as attitude change, awkward for no reason, unexpectedly serious. Energy theory is explained by the concept of ‘release of nervous energy (release theory)’ ‘release of nervous excitement’ and ‘tension and relaxation’. Nakamura (2017) pointed out the importance of the energy theory factor (Spencer, 1859; Freud, 1905), the release of surplus nervous energy.

(D) Discrepancy between implicature and explicature. This item could be classified from D1 to D12 such as militant question, answer with high versatility and unnatural metaphor. The relevance theory has been conducted mainly by Sperber and Wilson (1986, 1995).

(E) Sound factors. This item was classified from E1 to E6 such as rhyming, tongue twister, homonyms, impersonation, higher and lower voice. Elements of sounds are also usually caused by deviations from the speed at which people talk.

(F) Recognition of congenital differences, attribute differences. (F) was classified from F1 to F3 such as ethnic, disabled and not understanding own culture. This item can be argued from ‘superiority theory’. Superiority theory is that when people recognise and point out ‘superiority’ over others, laughter is born.

(G) Change in framing. This item was classified from G1 to G4 such as unexpected event against arrangement, strange behaviour at the beginning of the scene, abrupt topics and reversal of position. This item also involves the discrepancy theory.

(H) Others. This item was classified from H1 to H2 such as the factor demonstrated from performance, visual effect.

4.5 Application of each work to small classification

Through applying the scene of programme to these factors, the reason of ‘how to make laughter’, ‘the commonality of method in two countries’, ‘the difference of each country’s tendency’ could be recognised. When this research applies classification to the programmes,

there are places where it is considered that laughter is occurring with a mixture of multiple factors. In that case, a factor that can be judged to be stronger is applied.

As a result, in terms of the percentage in the US and Chinese programs, there was a trend difference in the factors of laughter occurrence (Table 2). In common both US and Chinese programmes, D11 ‘pointing out strange reality, pointing out mistakes’ is more than 10%, the most cause of laughter is D10 ‘roundabout rephrasing’ which also occupies a relatively high proportion in both the US and Chinese programmes.

Concerning the factor of generating laughter, the top items of the US work and the top items of the Chinese work are shown in Table 2.

Table2. Descending order the factors of laughter occurrence on each programme (U.S, China)

US	China
D11 : Pointing out strange reality, pointing out mistakes (15.2%) 42	D11 : Pointing out strange reality, pointing out mistakes (12.6%) 21
D10 : Roundabout rephrasing (9.4%) 26	C10 : Unexpectedly serious, tragedy, furious (7.8%) 13
B5 : Serious discussion on fiction (6.5%) 18	B3 : Exaggeration (7.8%) 13
A5 : Strange commitment of specific characters (6.1%) 17	G1 : Unexpected event against arrangement (7.8%) 13
A2 : Missing ability to read the air (5.1%) 14	A13 : Brainless, poor common sense (7.2%) 12
D9 : The difference between true intention and public stance (5.1%) 14	D10 : Roundabout rephrasing (4.8%) 8
C6 : Awkward for no reason (4.7%) 13	G2 : Strange, abrupt behaviour at the beginning of the scene (4.8%) 8
A17 : Mistake, acceptance of mistake (4.3%) 12	D6 : Unnatural metaphor, unnatural illustration (4.8%) 8
B4 : Logic to justify strange commitment (4.0%) 11	C2 : Attitude change (4.8%) 8
B6 : Complex explanation derived from new knowledge (4.0%) 11	A12 : Stingy behaviours (4.8%) 8

4.5.1 Commonality of two countries

D11 is one in which one of the performers makes a descriptive mention about some sort of ‘funny thing’ happening. ‘To recognise funny things’ also includes elements of disagreement. On the other hand, there is some kind of transmission intention and relevance to the act of the characters describing a funny situation and telling others to inform them. So, these cases are categorised into D. D10 is a roundabout paraphrasing, it brings about a low relevance that does not convey to the listener smoothly. This also has the effect of causing the viewers to ‘the viewers view it with sarcasm’.

4.5.2 Difference of each country

Other than the commonality, the elements in B5, A4, A2 are among the top items in US programmes, and the elements in C10, B3, B1 are among the top items in Chinese programmes.

5 Specific analysis of cases

From the script of the transcribed work and the content of the programmes, This paper will analyse concrete examples of factors that occur frequently.

5.1 Application of each work to small classification

5.1.1 Consideration of the case of commonality of two countries

This research will focus D11 case from *Big Bang Theory* as a 'commonality of two countries'

US case analysis

Big Bang Theory 1-2 2: 22-

Sheldon: I have a very wide circle. (1) I have 212 friends on myspace. (2)

Leonard: Yes, and you've never met one of them.(3)

In this conversation, laughter occurs in three places (1)-(3).

(1) B3 'Exaggeration'

(2) D6 'Unnatural metaphor, unnatural illustration'

(3) D11 'Pointing out strange reality, pointing out mistakes'

(1) is not like wide, but laughter is born in Sheldon who exaggerates it. In (2), to show the extent of friendship relations, 'laughter' is born with 'unnaturalness' indicating the number of 'friends on SNS'. In (3), Laughter is raised by pointing out from the script of 'You never met one of them', viewers can realise 'the absence of Sheldon's friendship relationship' again.

China case analysis

Aiqing Gongyu 1-1 4: 22-

In the apartment, Meijia (woman) and Xiaoxian face for the first time. A scene where Meijia asked Xiaoxian.

美嘉：请问你是街道办事处下属公寓住户委员会妇女主席吗？(1)

Meijia: Are you the woman president of the condominium housing committee in the district office?

小贤：副主席。(2)

Xiaoxian: Vice-president

(1) E3 'Homonyms, mistakes with similar sounds'

(2) D11 'Pointing out strange reality, pointing out mistakes'

(1) Laughter occurs when Meijia obviously knows that he is a male, listening to 'Are you the woman president?' Although this part includes elements of A13, it is more reasonable to interpret the utterance mistake as a result of the similarity of pronunciation of 'woman president (Chinese pronunciation: *Fùnǚ zhǔxí*)' and 'vice-president (Chinese pronunciation: *Fù zhǔxí*)'. Even though this mistake alone makes laughter by mistake of Meijia, laughter can be reconstructed as (2) by Xiaoxian uttered with '*Fù zhǔxí*' with a strong tone and corrected.

5.1.2 Focusing the feature of US: A consideration on a 'serious discussion on fiction' B5

B5 'serious discussion on fiction' is a factor mostly found especially in American products.

Big Bang Theory 1-2 2: 22-

A scene in which all the characters gather and talk in front of the elevator. Leonard told Penny, the topic of the movie *Spider-man*, and Penny mentioned the scene '*Spider-man* took Royce in the air', Sheldon joined.

Sheldon: You realise that scene was rife with scientific inaccuracy.(1)

Penny: Yes, I know, men can't fly.

Sheldon: Oh no, let's assume that they can.(2) Lois Lane is falling, accelerating at an initial rate of 32 feet per second. Superman swoops down to save her by reaching out two arms of steel. (3) Miss Lane, who is now travelling at approximately 120 miles per hour, hits them and is immediately sliced into three equal pieces. (4)

- (1) B5 'serious discussion on fiction'
- (2) B2 'contradiction'
- (3) B5 'serious discussion on fiction'
- (4) B6 'complex explanation derived from new knowledge'

(1) makes laughter from the factor of B5 'serious discussion on fiction'. Sheldon inconsistently puts scientific knowledge into the fictional world *Spider-man*. B2 'contradiction' has arisen on (2). Sheldon said 'scientifically impossible' reverting fiction into reality, and denied 'assumption', but he said '*let's assume that they can fly*', accepted the setting of 'assumption'. The laughter of (3) occurs in childishness that seriously discusses fiction by adding notions such as per second and speed based on precise calculation. (4) adopted B6 'complex explanation derived from new knowledge'. New knowledge means the knowledge of a new concept that seems to be 'indeed' for viewers. This block can be said to be the highlight of the *Big Bang Theory* by mixing B2, B5 and B6 into one block.

5.1.3 Focusing the feature of China: A consideration on 'exaggeration' B3

Resulting from investigation, I could point what is widely used in China is B3"exaggeration". I would like to indicate concrete script from *Aiqing Gongyu*.

Aiqing Gongyu 1-1 4: 22-

In the living room, Yifei and Ziqiao, Xiaoxian talked about going to dinner, and at the same time Wanyu and Zhanbo came into the room as if he had listened to them next door.

婉瑜：谁叫我，谁叫我(1)

Wanyu: Who called me? Who called me? (1)

一菲：哇，你耳朵这么灵啊

Yifei: Wow, you have sharp ears.

展博：是鼻子灵，婉瑜说她问到了、大餐的味道(2)

Zhanbo: It is the nose spirit, Wanyu said that she sniffed the taste of the big meal. (2)

子乔 (本心)：妈呀，这么多张嘴，一剑杀了我吧(3)

Zi Qiao (inner heart): Oh my god, so many mouths will kill me. (3)

- (1) G1 'unexpected event against arrangement'
- (2) D10 'roundabout rephrasing'
- (3) B3 'exaggeration'

Laughter of (1) is occurring in the unexpected development that they entered the room with good timing as if they were hearing it. Laughter of (2) occurs by D10 'roundabout rephrasing'. It was the timing of two people entering the room to listen to the story, while Yifei admired that 'I heard ear', while Zhanbo said 'Her nose was working to luxury food'. The laughter of (3) originated from Ziqiao's exaggerated expression, which was originally thought to be a treat for only Xiaoxian. As a result, Ziqiao found he would have to increase

the number of people who have to feast, and disappointed, said exaggeratedly ‘many mouths will kill me’.

6 Findings

The new discovery and viewpoint obtained in this research can be said to be the following three items.

1. In conventional research, it was difficult to classify the laughter of sitcom comedy programmes in concrete forms. The novelty and the high degree of application to sitcoms can be recognised in the classification method presented in this research. It was possible to classify all of the laughter in the US sitcom *Big Bang Theory* (on 1-1, 1-2) and China’s *Aiqing Gongyu* (1-1).

2. In the conventional humour analysis, the occurrence of laughter in the flow of tension to relief has been presented using ‘energy theory’. In Martin and Ford’s (2018) paper on the analysis of humour, although they use ‘relief of tension’, they never mention ‘from relief to tension’ as vector in the opposite direction. Hurley (2011) also described ‘In general, release theories claim the tension from thought can build up, and when this tension released by a positive emotion that results from further thought, the energy is transformed into (or spent by) laughing’. In the sitcom comedy programme, in both the US and China, it emerged that laughter was established not only in ‘relief of tension’ but also in ‘from relief (relax) to tension’ in energy theory.

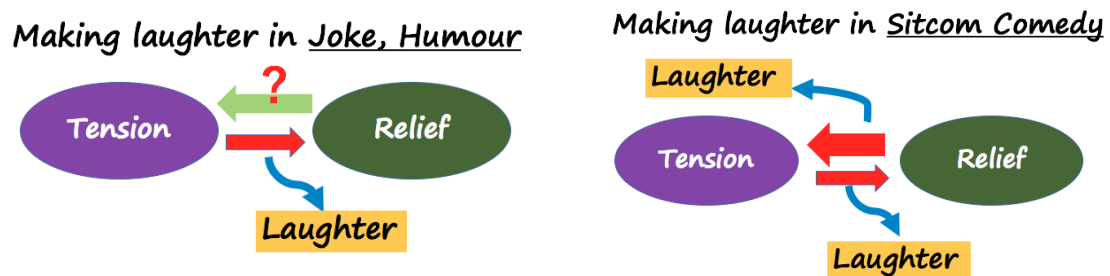


Figure3. Comparing ‘making laughter in joke, humour’ with ‘making laughter in sitcom comedy’

3. When converting to the same time, the amount of laughter in the Chinese programme is about half that of the laughter the US programme. This is also related to the linguistic characteristics. In conveying Chinese language and humour, there is usually a time lag in understanding related to the visual elements in TV programmes, so the number of laughs in a Chinese programme can be taken to be fewer than in an English language programme.

7 Conclusions

Through this research, it transpired that the most laughter was borne out of the act of ‘pointing out mistakes’ and ‘pointing out strange reality’ in sitcom comedy programmes. The method of designing laughter in English-speaking countries and Chinese-speaking countries also influences linguistic characteristics. ‘The difference between true intention and public stance’ is a sarcastic effect that skilfully uses the relevance of words in communication.

In the US programmes, a theoretical construction using fiction and reality can be seen. In Chinese programmes, a lot of laughter building from homonyms, exaggeration and setting levels is done relatively. This tendency comes from the utterance system of Chinese expressing by using tone (four tones). Chinese language is spoken by the magnitude, the high and low of the sound, and is thought to be due to features such as making a metaphor on exaggeration, including impossible assumption into conversation. In Chinese programmes, there is a tendency to produce laughter due to structural changes rather than the magnitude of relevance.

As a result of classification, it was found that the laughter occurrence of the US programme is about twice as fast as that of the Chinese programme. When the viewers 'listened' to the story, it is easy to understand the phonetic character 'English' is 'what you are saying'. On the other hand, Chinese words as an ideogram are many homonyms, so it can be considered that Chinese language is harder to judge instantaneously than English language. Watching from industry structure, in China, basically-recorded programmes are supplemented with subtitles at the bottom of the screen. It has been thought of to compensate for difficulty in understanding due to bias in pronunciation in each region by appending the unified notation of Chinese character.

Because the sitcom format is based on the humorous combination of words, there occurs a time lag of understanding in Chinese language, so there is a tendency to make heavy use of 'unexpectedly serious, tragedy, furious, unexpected reaction, result' and 'unexpected event against arrangement' than multiplication of words.

8 Implications and Future Research

Future tasks include the need for concrete analysis using more programme examples. In addition to items detailed in the classification presented in this paper, more concrete analysis can be done. Further cases, other sitcom comedy programmes in the US and China, or programmes excluding the US and China could also be used to explore the designing laughter of programmes in various languages and cultures.

Categorised items can also be seen to function as premises from the factors. There is room for improvement in accuracy such as 'medium classification', which is setting intermediate classification between large classification and small classification, or upgrading small classification to medium classification and setting new subclasses.

9 References

- Arthur Asa Berger. (1992). *An Anatomy of humor*. Routledge
- Attardo, S., Hempelmann, C. F., & Di Maio, S. (2002). Script oppositions and logical mechanisms: *Modeling incongruities and their resolutions*. *Humor*, 15(1), 3–46.
- Bergson, Henry, Freud, Siegmund .(2016). *Warai / bukimina mono*. (Heibonsha raiburari) ベルクソン, アンリ,フロイト,ジークムント「笑い／不気味なもの」(2016年、平凡社ライブラリー)
- Deirdre Wilson & Dan Sperber. (2004, Sperber 1994; Wilson 2000). Relevance Theory. In L. R. Horn & G. Ward (eds.), *The Handbook of Pragmatics*. (Blackwell), 607-632. Deirdre Wilson & Dan Sperber『関連性理論－伝達と認知』(2000年、研究社)
- Emmy awards website. <https://www.emmys.com/awards>
- Forabosco, G. (1992). Cognitive aspects of the humor process. *The concept of incongruity*. *Humor*, 5(1), 45–68.
- Gillian Rose. (2016). *Visual Methodologies : An introduction to researching with visual materials* :SAGE publications
- Herbert Spencer.(1984). *kakō-sei no fuitchi to warai no seisei warai no seirigaku'*, kimura yōji-yaku, "gendai shisō tokushū warai. vol. 12 - 2, Ōdzuchi-sha. (ハーバート・スペンサー「下降性

- の不一致と笑いの生成笑いの生理学」、木村洋二訳『現代思想 特集 笑い』vol.12-2、青土社、1984年)
- Hillson, T. R., & Martin, R. A. (1994). What's so funny about that?: *The domains-interaction approach as a model of incongruity and resolution in humor*. *Motivation and Emotion*, 18(1), 1–29.
- Hulu website. <https://www.happyon.jp/>
- Hurley, M. M., Dennett, D. C., & Adams, R. B. (2011). *Inside jokes: Using humor to reverse-engineer the mind*. Cambridge MA: The MIT Press.
- John, B., Thompson. (1990). Ideology and Modern Culture. *Critical Social Theory in the Era of Mass communication*. Polity Press
- Matthew M. Hurley, Daniel C. Dennett, & Reginald B. Adams (2011), *Inside Jokes: Using Humor to Reverse-Engineer the mind*. MIT Press. Matthew M. Hurley “hito wa naze warau no ka” (2015-nen, keisōshobō) マシューMハーレー 『ヒトはなぜ笑うのか』 (2015年、勁草書房)
- Mio, J. S., & Graesser, A. C. (1991). Humor, Language, and Metaphor. *Metaphor and Symbolic Activity*, 6(2), 87–102.
- Psychologytoday.com *Sheldony or Asperger?: The Big Bang Theory*
<https://www.psychologytoday.com/intl/blog/aspergers-diary/200904/sheldony-or-asperger-the-big-bang-theory>
- Rod A. Martin, Thomas E. Ford. (2018). The psychology of humor. *An integrative approach*. Academic Press
- Sitcom <Wikipedia> <https://en.wikipedia.org/wiki/Sitcom>
- Suls, J. M. (1972). A two-stage model for the appreciation of jokes and cartoons: An information-processing analysis. In Goldstein, J. H., & McGhee, P. E. (Eds.), *The psychology of humor: Theoretical perspectives and empirical issues* (pp. 81–100), New York: Academic Press.
- Walter J. Ong (1982) *ORALITY AND LITERACY the technologizing of the Word* Methuen&Co.Ltd. W-J ong `koe no bunka to moji no bunka'(Sakurai Naofumi Hayashi Masahiro kasuya keisuke-yaku). Fujiwara shoten. (W.Jオング『声の文化と文字の文化』桜井直文・林正寛・糟谷啓介訳、1991年、藤原書店)
- Jia yuan (2016) 'Zhong mei qingjing xiju de youmo xing bijiao' (Shanxi shifan daxue) 茄苑 (2016) 「中美情景喜剧的幽默性比较」 (The Comparison of Chinese American Situation Comedy Humor), 山西师范大学)
- He caihong (2011) 'Xiao de jiema' (shandong shifan daxue) 賀彩虹「笑的解码」 (山東師範大学、2011年)
- Aiqing Gongyu baidu baike <https://baike.baidu.com/item/愛情公寓/17434> (愛情公寓百度百科)
- Aiqing Gongyu di yi ji di yi ji <https://www.youtube.com/watch?v=YF2ha8CJWv4> (愛情公寓第1季第1集)
- Amemiya Toshihiko “warai to yumoa no shinri-gaku” (Mineruvua Shobō, 2016-nen) 雨宮俊彦『笑いとユーモアの心理学』 (2016年、ミネルヴァ書房)
- Takagi Yukari (2017). `Shichuëshon komedi ni okeru gyagu no seisei to kino' Kobedaigaku daigakuin kokusai bunka-gaku kenkyu-ka (高木ゆかり (2017) .「シチュエーション・コメディにおけるギャグの生成と機能」神戸大学大学院国際文化学研究科 (博士論文))
- Nakamura Tagiru (2017) `Yūmoa rikai katei ni kansuru kenkyū — fuchōwa no kaishō to sono shinkei kiban —'(Keiōgijuku daigaku daigakuin seisaku media kenkyū-ka) (中村太戯留 (2017) 「ユーモア理解過程に関する研究—不調和の解消とその神経基盤—」 (慶應義塾大学大学院政策・メディア研究科))
- Acknowledgement: The author would like to thank Enago (www.enago.jp) for the English language review.

About the Authors:

Yoshimatsu, Takashi: He is a program producer and moderator for Asian television and radio stations. At the same time, he is enrolled in the Doctoral Program at Kyushu University, and is studying about program production and program contents.

Ikeda, Minako: She teaches design history and information and editorial design as Associate Professor at Kyushu University. She is conducting

several design research projects for revitalizing local traditional crafts in contemporary society.