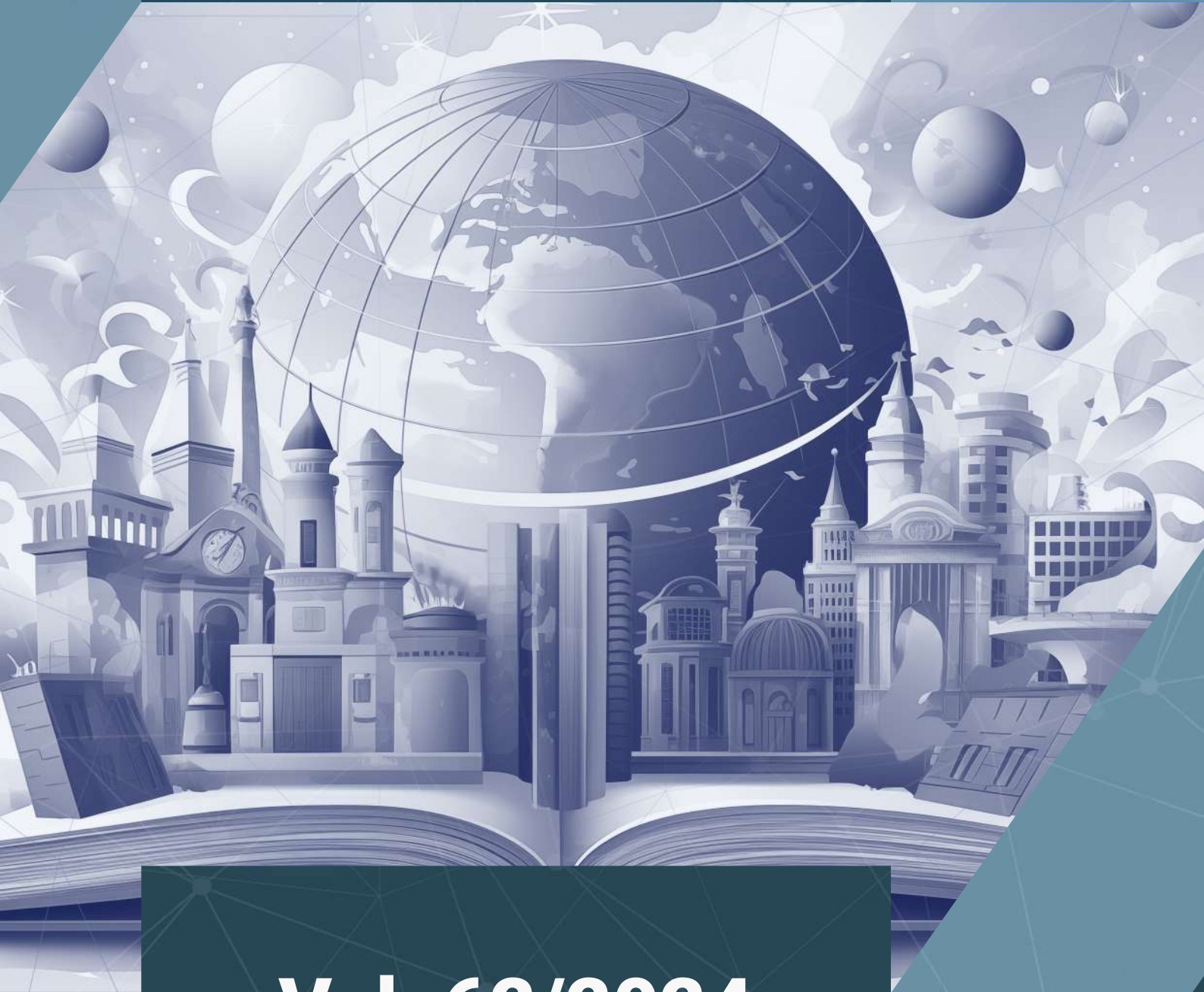




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Responding to Videos on Individual Struggle – An Analysis of Digital Empathy in *Bilibili* Comments

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Abstract: In an era dominated by digital technology, the study of empathy in digital environment has gained increasing attention. This paper has analyzed the comments responding to the interviews featuring grassroots' struggle on a popular Chinese video-sharing platform *Bilibili*, and found that those comments expressing empathy can be categorized into three types according to the Interpersonal Reactivity Index: comments showing empathic concerns, comments demonstrating perspective-taking, and comments sharing similar personal stories. The paper discovered that, in the video-audience relationship, empathic comments turned to more description of similar self-experience than emotional concerns and perspective-taking showing understanding of other's emotions. This paper has expanded the study of empathy based on post-comment interactions and added to the exploration of reading emotions in texts.

Key words: digital empathy, comments, social media, self-disclosure

1 Introduction

Empathy, a word with Greek origin meaning “to enter feelings from the outside”^[1], has received considerable attention in research and meanwhile brought about many disagreements as to its definition as a psychological concept. In early research, empathy has been studied either as cognitive reactions^[2] or affective responses^[3], both of which were later integrated into a multidimensional approach^[4-6].

Empathy is essential in social interactions. It has been proved to be a source of altruistic motivation^[7] and high empathy was found associated with prosocial behavior^[8]. Nevertheless, empathy has been found decreasing among college students in recent years^[9], and one likely contributor is the pervasive digital technology and social media use in daily life^[9-10]. Research focusing on the empathy education with digital strategies appeared in large numbers^[11-13], aiming to help students in college realize the importance of perspective taking and emphatic reactions in online communication. In the experiments, various measurement tools have been

used to test the empathy level, such as Jefferson Scale of Empathy (JSE) [14], Empathy Quotient (EQ) [15], and Interpersonal Reactivity Index (IRI) [4]. JSE and EQ, in the form of questionnaires, were at first designed to measure empathy for medical staff and autistic patients respectively, and later applied to an extended population. With a multidimensional view, IRI has included both affective and cognitive aspects of empathy and contained four different subscales rather than a mere list of questions. The subscales offer possibilities to clearly define the types of emphatic reactions and explore the “systematic similarities and differences between these types of empathy” [5].

This paper has adopted the subscales of IRI and extended them to the narrative texts in comment section of *Bilibili*, a “popular youth-oriented video streaming and sharing” [16] platform in China, aiming at discovering the patterns of emphatic expressions among audience. The borrowing of an index designed for statistical study into the content analysis of texts help explore novel ways of empathy study in digital communication and may provide a different perspective as to how we can read emotion in texts.

We start by sketching out some literature on digital empathy and self-disclosure of emotion before outlining the research method and presenting our analysis of empathic expressions in comments on *Bilibili*.

2 Digital empathy

Even though it is our nature to respond emotionally to the people around us [10][17], concerns about lack of face-to-face communication and loss of empathy as a result have promoted the increasing studies on digital empathy. Terry and Cain [18] defined digital empathy as the “traditional empathic characteristics expressed through computer-mediated communications”. Friesem [19] also provided a similar definition based on the “traditional empathy phenomena”. While it is believed that digital empathy contains the same core as empathy in its traditional sense [18], Friesem [20] brought to us a broader vision on the characteristics of digital empathy, in which empathy accuracy, self-empathy, and imaginative empathy were proposed in addition to the established perception of cognitive empathy and affective empathy. The digital space may create new patterns of empathy in line with features of online communication.

Indeed, communication patterns have been changed during the online interaction with digital device. Emotional cues and signals, common in face-to-face settings, are filtered out [21], and the communication between social media users who are absent from each other will lead to a separation between the content of messages and emotions conveyed in the message as far as both the sender and the receiver of the message are concerned. The retreat of intercorporeal experiences may lead to the perception of users at the other end of the online communication as “avatars or usernames instead of actual persons” [18].

In addition to studies on empathy education, a body of research focused on interactions between posters sharing emotions and commenters offering empathic responses, since posts containing sympathy, apology or complaint “play significant roles in sentiment and emotion influence” [22]. Research explored how digital empathy was expressed in response to various

problems expressed in posts. Unay-Gailhard *et al.* [23] explored the digital empathy surrounding farmers' TikTok posts expressing concerns about climate change and found that the typical empathic engagement was emotional reactions showing mutual understanding in comments. Brownlie & Shaw [24] analyzed exchanges about emotional distress on Twitter and discovered "empathy, love and affection" in comments, which were believed to "circulate across interactions on social media". The existing research tended to treat posts and comments on the posts, though asynchronous, as dialogues, and focus on the interactional dimensions of the post-comment pair, e.g. "empathy rituals" of exchanges about emotional distress by reading small data on Twitter [24], or asking the question *do you feel what I feel* in Twitter conversations with computational methods [22]. The interactive dimension was more obviously demonstrated in Hale *et al.*'s study [25], in which the narrative features of cancer-related posts on *Imgur* were identified as predictors for social support in comments, empathy as a major type.

What patterns of empathy would we find in comments, when not coupled with posts as part of the conversation, such as videos presenting interviews of people struggling in life? In comments, the audience may also show emotional reactions and offer empathy to the characters in the video, yet the tie between posts and comments won't be as close and the relationship might lack the interactive sense as in previous studies. Thus, the first research question as to empathy demonstrated in comments in a non-dialogic setting is proposed:

RQ1. What are the features of empathy in the comments under the video posts?

3 Disclosure of emotion

Studies on responses to emotion-sharing posts in social media intended to provide implications for healthcare professionals [25] or to increase the "expressed level of empathy" in web-based mental health conversations [26]. The readiness to disclose one's emotions which might not be revealed to intimate friends is not uncommon in digital spaces. People might share intimate information, depression or illness, unfortunate stories or traumatic experiences online. This is what Bargh *et al.* [27] has named "strangers on the Internet" phenomenon, an analogy to "stranger on the train" behavior, characteristics of sharing private life stories with a stranger seat-mate on the train [28]. The disclosure of personal negative events is believed to reduce the emotional load [29] and promote physical health [30] to the discloser.

Being physically invisible in social media may give people "the courage ... to do things that they otherwise wouldn't" [31], including sharing the private emotions or experiences. Disclosing one's mental problems or fatal physical illness and obtaining empathic support in interactive comments demonstrate one side of the self-disclosure in social media. The "brave" act of sharing may take place in both posts and comments, as the analysis of comments in our data suggested the self-disclosure on the other end of the interactions. Here, we put forward our second research question related to the emotion-disclosure in comments:

RQ2. How is self-disclosure presented in comments?

4 Method

We chose videos for our study from the popular Chinese video-sharing platform *Bilibili*,

which boasts of 202 million monthly active users, 86% of whom are composed of young people under 35 years old ^[16]. The videos on *Bilibili* are publicly accessible to its users. We chose four videos from an account called “Beijing Youth-Onceview”, which focuses on interviewing young men and shoots videos oriented towards a variety of problems young men face today.

The four videos selected shared a similar theme of hard life and hard work, the length of videos ranging from 9 minutes to 14 minutes. In the videos, the interviewees narrated their miserable experiences in study and life and how they got over the distress and strove for the goal in their life. Specifically, Video 1 featured a girl student from a top normal university. In a poor family, the parents could hardly make both ends meet, but they toiled on land and struggled to pay for the tuition fee for her and her siblings, because her parents believed the opportunities to change the present poverty lied in education for the children. She decided to work as a teacher in her hometown after graduation. Video 2 described how a lady strived to settle down in Shanghai, one of the busiest metropolises in China, and get rid of the stigmatized identity of being an “outsider” in the city. In Video 3, a young man complained of his painful experience in senior high school. Though he was in the best class of school, the fact that he usually came the last in exams and was looked down upon by the teacher in charge of his class and his parents depressed him so much that he couldn’t get over it even after four years of college study. He was determined to become a teacher in a poor region and help those children who were born with limited educational resources. In Video 4, the young interviewee narrated his school years, from primary school to high school, when he was bullied by classmates and teachers because he was a little “different” in mind. Now he has outgrown those discriminative looks and achieved success in his own way.

The reason we chose these four videos was that they shared stories of grassroots’ struggling for an improved self and a better life. When they self-disclose their sufferings and hardships, the negative feelings conveyed in the interview may “contribute to the emergence of empathy or closeness among the interacting partners” ^[29]. Though in our study, the audience and the interviewees do not interact in the same way as those online one-to-one chat which produces immediate response between two participants, the impact of the adversaries would still elicit empathy from the audience.

For each video, using the “most likes” ranking on *Bilibili* website, we obtained 100 comments going from the highest number of “likes” to a less number. In our data, we included only root comments, i.e. comments that directly respond to the post ^[25], as root comments help us maintain the focus on our research questions more closely than the response comments that respond to other commenters ^[25].

We followed the measure scales listed in IRI ^[4] and sorted out our data on the basis of the subscales in the index. The IRI, consisting of 28 self-report questions in four subscales, was originally designed to measure empathy levels for statistical study. It has adopted a multidimensional approach, i.e., both emotional and cognitive aspects of empathy are included in the index. We found that three measure scales in IRI fit for our data. They are the perspective-taking scale, the empathic concern scale, and the fantasy scale. First, we classified the comments into empathic and non-empathic ones, then the former type of comments was categorized into

the three scales of IRI. Sometimes when a longer text in one entry of the comment contained contents which can be segmented into more than one scale, expressing both emotional response and showing support, for example, we put the comment into different scales.

The examples for analysis in this paper were translated by the authors. During translation, we follow Markham^[32] and synthesize the comments rather than translating the exact version of the comments.

5 Discussion

In our data, 310 out of 400 comments expressed empathy in one way or another (Table 1). Social media users tended to “accommodate” each other’s emotions^[22], namely, expression of particular emotions, such as showing sympathy or understanding of the original posts, might influence others to become more positive. This is also true of negative emotions which does not apply here. Among the total 310 empathic comments, 66 comments (21.3%) expressed empathic concern showing emotions of surprise, respect or admiration, 113 comments (36.5%) demonstrated commenters’ understanding and support in the video characters’ shoes, and 143 comments (46.2%) showed commenters’ understanding of the characters’ hard life by sharing their personal stories.

Table 1. Distribution of Empathy Types in Comments (n=310)

Category	Number of comments	Percentage
Empathic concern	66	21.3%
Perspective-taking	113	36.5%
Fantasy	142	45.8%

5.1 Empathic concern

According to Davis^[5], the empathic concern scale “measures the tendency to experience feelings of warmth, compassion, and concern for other people”. Thus, we have put the comments showing sympathy, respect, commendation, good wishes under the heading of empathic concern.

Example 1

The girl has been holding back her tears. How much I want to give her a hug so that she could cry at her will! (Comment 23, Video 1)

Example 2

Cheer up. It will get better soon. (Comment 64, Video 1)

Example 3

I almost cried while watching the program. Give my respect to the selfless paternal love and the hard-working child. (Comment 95, Video 1)

Example 4

To be frank, I dare not watch the video to the end. It’s not because I don’t like it, but because I have deep fear for it. I had been treated in a similar way. I appreciate that someone could voice the injustice and give my respect to those who survived the tough life. (Comment 20, Video 4)

The commenters gave emotional response to the poverty, grief, and injustice the interviewees have undergone. The exclamatory sentence “How much I want to give her a hug” in Example 1 and the imperative “Cheer up” in Example 2 expressed the empathic concerns by giving comfort and encouragement to the interviewed girl in the video, who has been struggling in poverty since childhood. The Example 3 showed the emotional involvement in the video, the commenter felt sorry for the interviewee and “almost cried” while watching the video. Another commenter, in Example 4, expressed his fear for the depressing incidents the interviewee has gone through, and explained that his fear was caused by the once-victim experience of himself.

It is likely that the commenters have constructed double identities of the interviewees in their mind. On the one hand, they were victims of unfortunate life, in need of care and protection. Hence, the commenters cheered on the interviewee and even promised a better future, which can be found not only in Example 2 as shown by “It will get better soon”, but also in many other comments in our data. The act of giving encouragement and trying to comfort the interviewees may be explained by the maternal care generalized to any vulnerable target rooted in human emotional systems^[33]. On the other hand, the interviewees in the videos were viewed as heroes in unfortunate life, deserving admiration and respect in comments as the following examples show.

Example 5

You are already a great guy. The best way to revenge on those who have hurt you is to become an outstanding man and leave them far behind. (Comment 60, Video 4).

Example 6

It took great efforts to come to top 1% among the students in the province during the college entrance examination. (Comment 28, Video 3)

Example 7

He is brave. I give my salute to him. (Comment 95, Video 4)

Example 8

She is already a hero in her life. This is the life for almost every one of the second generation of Shanghai drifters, who plods on and plays the role of a hero in the family. (Comment 9, Video 2)

In Example 5-7, expressions like “a great guy”, “great efforts” and “brave” revealed admiration towards the interviewees’ courage. Most likely this admiring emotion came from the commenters’ imagination concerning the tough life in which the interviewees have been placed, and the assumptions of their own inability to cope with the difficult situation. A further step away from admiration was demonstrated in Example 7 when the commenter said “I give my salute to him”. Example 7 is a comment extracted from Video 4, the main theme of which was discrimination against the slow-minded student. The young man has endured all the despised looks and behaviors and achieved personal success. The word “salute” showed the deep understanding and heartfelt admiration for the interviewee in the video. The repetitive use of the word “hero” in Example 8 made the commenter’s feeling of admiration more obvious.

5.2 Perspective-taking

Perspective-taking is the cognitive aspect of empathy, and in Davis' ^[5] IRI it refers to "the spontaneous tendency ... to adopt the psychological perspective of other people". In our data, comments took the interviewees' perspectives in two ways. One is the explicit expression of understanding with obvious linguistic forms "I understand...". The other is represented by comments interpreting feelings, experiences, and viewpoints of the interviewees according to the commenters' understanding.

Example 9

I can understand the feelings of this girl and all her sufferings. I can feel it in the same way as she did. (Comment 40, Video 1)

Example 10

I strongly identify with the girl's feelings of inferiority and loneliness. I feel quite puzzled in my own life. I grew up and went to school in Shanghai. Each time when we were asked to hand in some documents in proof of our identity, mine was different from theirs. I can't feel the sense of belongingness in this city. (Comment 88, Video 2)

Example 11

I can completely understand what the interviewee has said! (Comment 94, Video 3)

The sense of "understanding" was conveyed in varied forms in Example 9-11. In addition to the simple and direct expression with the word "understand" in Example 9 and Example 11, synonyms "feel" in Example 9 and "identify with" in Example 10 were also employed. Strategy of emphasis appeared in the form of both linguistic and non-linguistic means. Linguistic emphasis was realized by the employment of degree adverbs, "strongly" and "completely" in Example 10-11, and in Example 9, "I can understand the feelings" and "I can feel it" were used in a repetitive way to emphasize the sense that "I can understand and I can enter into her feelings". Another way of emphasis was found in Example 11, in which the comment ended with an exclamatory mark, showing a strong sense of understanding and agreement. In Example 10, a personal experience was shared as testimony of understanding the interviewee's feelings, the topic of which will be elaborated on in 5.3.

Elliott *et al.* ^[34] explained, based on the neuroscience research, perspective-taking is "a more deliberate, conceptual" process in empathy. In our data, in addition to the explicit expression "I understand", the conceptual process of understanding others' feeling was demonstrated by interpretation.

Example 12

What he has said is true to reality, which can only be understood by native citizens in Henan Province. (Comment 41, Video 3)

Example 13

"I tried very hard to become a normal person". (Comment 64, Video 4)

Example 14

Living a life between poor rural hometown and dazzling metropolis, it is natural to feel inferior when they compare themselves with the local citizens. (Comment 52, Video 2)
In Example 12, the sense of understanding was implied in the comment "... can only be

understood by native citizens”, leading to the inference that “I can understand because I am a native citizen”. The comment in Example 13 came from a quotation from the interviewee’s words. It is an indirect way to show agreement when someone expresses his view by quotes from someone else, as Smith ^[17] has argued that “to approve of another man’s opinions is to adopt those opinions, and to adopt them is to approve of them”. The interviewee in this video was slightly mentally-retarded and despised by his classmates and teachers in his school years. He mentioned his goal of life was to “become a normal person” and live a life like a normal person does. Repeat of the same words in the comment in Example 13 expressed not only the commenter’s understanding from the interviewee’s perspective, but also a sense of pity for him to live such a tough life and slight irony of the unfriendly social atmosphere. Example 14 includes a comment in video 2, in which a lady, growing up as a migrant child, complained the difficulties to settle down in the big city and the anti-outsider attitude she felt. The comment interpreted the reason for the dilemma the interviewee has been facing during the period of her growing up. In this interpretation process, the commenter takes both the perspective of the interviewee and the perspective of a spectator, and gives interpretation based on his understanding of the situation.

5.3 Fantasy by way of sharing personal experience

Davis ^[5] defined the purpose for fantasy scale was to “assess the respondents’ tendencies to imagine themselves in the place of characters in books, movies, and plays”. Empathy for fictive characters in films, novels and non-fictive ones, e.g. persons who are real but not present, are both included in Fuchs’ term “fictional empathy” ^[35]. Videos of interviews shown in public on the Internet might arouse emotions in a similar way as movies do in that they both tell stories and intend to leave an impact on audience, with the mere difference that the former features non-fictive characters. Therefore, in this paper, we put comments sharing personal experiences into the category of fantasy and employ the term “fictional empathy” to refer to the empathy expressed in the comments.

In our data, fictional empathy was demonstrated in almost half of the comments, in which commenters explained how they felt the sufferings narrated in the video by sharing their own experiences as a personal testimony of understanding. The motivation of sharing personal experiences can be traced to the studies in brain science, where it was found that perception of another individual in pain would activate the observer’s neural network to process the first-hand experience of pain ^[36].

Example 15

I was born in the same province with the interviewee. My parents are both illiterate and they even hardly know how to write their names. Nevertheless, they encourage us to try our best in school. I am now doing my master’s degree, and my younger brother is a freshman in college. Everything is getting better. (Comment 28, Video 1)

Example 16

I used to come last in a class full of very intelligent and excellent students in high school. I was so upset that I have lost all my vitality, confidence, and ambition. I am 26 now, but I haven't got over it yet. (Comment 64, Video 3)

Example 17

When I was in high school, I went as a guide with my teacher to visit a poverty-stricken family in a remote area. The house was almost empty. My teacher wept at the sight of the place. Life for students in poverty is too tough. (Comment 5, Video 1)

Comments in Example 15-16 described the similar experiences the commenters had earlier as the interviewees did. In Example 15, the experience is almost the same as the girl in video 1: they were both born in an underdeveloped region, grew up in the care of uneducated parents who were aware of the importance of education, and finally they lived up to the parents' expectations. The degree of similarity declines in Example 16. In video 3, the interviewee shared his misery in high school and his plan of ambition after getting his master's degree. Yet the comment in Example 16 told a sad story without an ending. It is an indirect experience in Example 17 that the commenter witnessed a poor family once and was shocked by the poverty.

The shared experiences vary in degree of similarity with those presented in the videos. The comments in this category are longer and detailed than other comments. It seems that the audience have a compelling will to share their own stories, which sometimes are not even related to the themes of the videos as the following examples show.

Example 18

There will be an end to hard times, and life would get better day by day. I was reminded of the first time my father left the village to work in cities. He hesitated on his way and went back home, but was driven out by my mother. He had to set off again. That was all in the past. (Comment 79, Video 1)

Example 19

My desk mate in junior high school was mentally-retarded, but our teachers gave much concerns to him. They asked him to stand up and answer questions in class and would explain the answer patiently if he failed to understand. (Comment 37, Video 4)

The comments in Example 18 and Example 19 described different experiences from the themes of the videos. Comments in Example 18 told a story about his father going out to work under the video showing a girl, with understanding and supportive parents, narrated her school years in poverty and her determination to help other kids in hometown after graduation. While the comments in Example 19 told the story of his desk mate who suffered from the same problem as the interviewee in video 4, but was treated fairly and lovingly by the teachers and classmates. The expression "life would get better day by day" in Example 18 and the happy school life of the desk mate in Example 19 conveyed the commenters' encouragement to the interviewee and the belief and confidence in the prospect of a better future. Particularly, "life would get better day by day" sounds like a wish and prediction to both the interviewee and the commenter himself.

Fuchs ^[35] has argued that virtual relationships lack "the direct feedback from the embodied contact" and the fictional emotions produced on these occasions tended to be "self-

referential”^[37], i.e., the emotions are directed to oneself rather than the other^[35]. The fact that many comments took the form of exhaustive self-description of past unhappy experiences and sometimes even experiences unrelated to the theme of the video echoed the self-referential tendency in fictional emotions. The features of online communication, distance and anonymity in particular, provide opportunities for self-disclosure of personal life stories, the phenomenon of which was termed “pseudo-intimacy” by Fuchs^[35]. From a psychological perspective, these videos about tough life experiences may “offer scenarios”^[37] for audience to “rehearse their emotional experience”^[37] and reflect on others’ emotions. As Illouz^[37] has argued that this psychological practice may help shape people’s self-understanding and interactions with others as well. Mostly likely, showing empathy offers space for young men to manage emotions, pressure, and interpersonal relationship in modern technological era.

In addition, some comments sharing personal experience may also include other means of empathic expressions such as showing empathic concerns or taking others’ perspectives.

Example 20

Cheer up, young girl! You have chosen a right path, and everything will turn out better gradually. One of my best friends also came from the poor mountainous regions. His parents tried all means to support him and his sisters, who became the first group of college students in village. Now he has bought his own car and house in the city, got MBA degree in Shanghai, and provided a better living place for his parents. I believe you will get rid of poverty as my friend did, and step forward to a bigger and brighter future! (Comment 27, Video 1)

Example 21

This is what this world looks like in reality, in which the weak are bullied and the strong are feared. When I was in high school, a classmate with mental deficiency was laughed at by almost everyone, and even students felt shameful to talk to him. At that time, I wondered why he was treated in such an unfair way when he did not do anything wrong. Meanwhile I realized the importance of kindness and good intentions. So, one day, if you meet a guy who suffers from the same mental problem as my classmate or the boy in the interview, please do not discriminate them for the reason which they are not responsible for. (Comment 3, Video 4)

In Example 20, before sharing personal experience, the commenter showed emotional concerns with encouraging words “cheer up”, and gave support of the interviewee’s choice by an affirmative statement “you have chosen a right path”. What’s more, description of the similar experience included not only the hard life the commenter’s friend endured, but also good results of overcoming those difficulties, which predicted a promising future and an implied good wish for the interviewee in the video. In Example 21, personal experience-sharing is preceded by an interpretative agreement that “the weak are bullied and the strong are feared” seems like a social rule in reality, indicating commenter’s understanding of the interviewee’s perspective. The commenter expressed his resonance with the boy’s sad experience in the video because he was an eye-witness of a similar story in high school. Empathic emotion has been proved as a source of altruistic motivation^[7]. Nevertheless, when the interaction has shifted from face-to-face to

video-audience setting, the altruistic behavior may depend on the power of language other than actions, as the comment in Example 21 called on people not to discriminate those who suffer from the same problem.

6 Conclusion

This paper has analyzed the empathy in comments on the four interviews presented on a Chinese video-sharing platform *Bilibili*, and found that a majority of the comments tended to be empathic towards the tough experience the interviewees had to undergo. Comments showing empathy or “understanding what another person is experiencing or trying to express”^[34] primarily fall into three patterns: giving emotional response, conveying the sense of understanding by adopting others’ perspectives, and expressing understanding by sharing personal experiences.

Our study shows, unlike the interactive one-to-one or one-to-several social media dialogues, the empathy based on the video-audience relationship demonstrates a tendency of more self-experience description, accounting for nearly half of the empathic comments in our data. It seems that the resonance of feelings expressed in comments is more felt by commenter’s similar personal experience than mere imagination. The emotional arousal evoked by similar experience from commenter may “mingle in a shared mental space”^[38] with the emotions expressed in the video, yet the line between self and other is clearly drawn, i.e. the similar feeling is experienced without confusion between the two individuals^[36].

One of the limitations of the study lies in its small size of data. A larger number of comments extracted from more videos would be inclusive of more features concerned with digital empathy. Nevertheless, the results of our study offer a revealing insight into the patterns of emphatic comments in an online setting and set the foundation for further exploration of digital empathy in social media. Additional examinations of comments in other social media platforms will provide valuable points of comparison. Especially when attention is turned to platforms that is more narratively focused, differences may be revealed between comments in response to narrative posts and comments on video posts, in which audience are more likely to be affected by audio-visual cues of the video character and emotion arousal in audience may emerge with more readiness. Further work on diverse platforms of social media which employ different means for communication should prove valuable for the understanding of digital empathy in a life dominated by technology and virtual connection.

7 References

- [1] Howe, D. (2013). *Empathy: What it is and why it matters*. Palgrave Macmillan.
- [2] Borke, H. (1971). Interpersonal perception of young children: Egocentrism or empathy? *Developmental Psychology*, 5, 263-269.
- [3] Stotland, E. (1969). Exploratory studies in empathy. In L. Berkowitz (Eds), *Advances in experimental social psychology*. Vol. 4. New York: Academic Press.
- [4] Davis, M. H., (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology* 10, 85.

- [5] Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113-126.
- [6] Hoffman, M. L. (1985). Interaction of affect and cognition in empathy. In C. E. Izard, J. Kagan, & R. B. Zajonc (Eds.), *Emotions, cognition, and behavior* (pp. 103-131). Cambridge University Press.
- [7] Batson, C. D., Duncan, B. D., Ackerman, P., Buckely, B., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, 40(2), 290-302.
- [8] Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101(1), 91.
- [9] Konrath, S., O'Brien, E., & Hsing, C. (2011). Changes in dispositional empathy in American college students over time: A meta-analysis. *Personality and Social Psychology Review*, 15(2), 180-198.
- [10] Anthony, G. G. (2009). Empathy in the Virtual World. *Chronicle of Higher Education*, 56(2), B10-B12.
- [11] Dolby, N. (2014). The Future of Empathy: Teaching the Millennial Generation. *Journal of College and Character*, 15(1), 39-44. <http://dx.doi.org/10.1515/jcc-2014-0006>
- [12] Blakemore, T., & Agllias, K. (2020). Social media, empathy and interpersonal skills: social work students' reflections in the digital era. *Social Work Education*, 39(2), 200-213. <https://doi.org/10.1080/02615479.2019.1619683>
- [13] Cole, R. F. (2022). Experiencing the reality of empathy. *Counselor Education and Supervision*, 61, 38-46. <https://doi.org/10.1002/ceas.12223>
- [14] Hojat, M. (2007). *Empathy in patient care: Antecedents, development, measurement, and outcomes*. New York: Springer.
- [15] Baron-Cohen, S., Wheelwright, S. (2004). The empathy quotient: An investigation of adults with Asperger syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34(2), 163-175. <https://doi.org/10.1023/b:jadd.0000022607.19833.00>
- [16] <https://walkthechat.com/what-is-bilibili-a-look-into-one-of-chinas-largest-online-video-platforms/>, accessed on August 17, 2024.
- [17] Smith, A. (2004). *The Theory of Moral Sentiments*. New York: Cambridge University Press.
- [18] Terry, C., & Cain, J. (2016). The emerging issue of digital empathy. *American Journal of Pharmaceutical Education*, 80(4), Article 58.
- [19] Friesem, Y. (2016). Empathy for the digital age: Using video production to enhance social, emotional, and cognitive skills. In S. Y. Tettegah & D. L. Espelage (Eds.), *Emotions, Technology, and Behaviors* (pp. 21-45). Academic Press. <https://dx.doi.org/10.1016/B978-0-12-801873-6.00002-9>
- [20] Friesem, Y. (2016). Developing digital empathy: A holistic approach to media literacy research methods. In M. N. Yildiz & J. Keengwe (Eds.), *Handbook of Research on Media Literacy in the Digital Age* (pp. 145-160), Vol. 1. Hershey, PA: IGI Global. doi:

10.4018/978-1-4666-9667-9.ch007

[21] Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp, & J. A. Daly (Eds.), *Handbook of Interpersonal Communication* (3rd ed., pp. 529-563). Thousand Oaks, CA: Sage.

[22] Kim, S., Bak, J. Y., Jo, Y. & Oh, A. (2012). Do you feel what I feel? Social aspects of emotions in Twitter conversations. In: *Proceedings of the sixth international AAAI conference on weblogs and social media*, Dublin, Ireland, 4-7 June, pp. 495-498.

[23] Unay-Gailhard, I., Lawson, K. & Brennan, M. A. (2023). An examination of digital empathy: When farmers speak for the climate through TikTok. *Journal of Rural Studies*, 102, 103075. <https://doi.org/10.1016/j.jrurstud.2023.103075>

[24] Brownlie, J., Shaw, F., (2019). Empathy rituals: Small conversations about emotional distress on Twitter. *Sociology* 53 (1), 104-122. DOI: 10.1177/0038038518767075

[25] Hale, B. J., Collins, R., & Brown, D. K., 2020. Posting about cancer: predicting social support in *Imgur* comments. *Social Media+ Society* 6 (4), 1-14. <https://doi.org/10.1177/205630512096520>

[26] Sharma, A., Lin, I.W., Miner, A.S., Atkins, D.C. & Althoff, T. (2021). Towards facilitating empathic conversations in online mental health support: A reinforcement learning approach. *WWW'21: Proceedings of the Web Conference 2021*. pp. 194-205. <https://doi.org/10.1145/3442381.3450097>

[27] Bargh, J. A., McKenna, K. Y. A., & Fitzsimons, G. M. (2002). Can you see the real me? Activation and expression of the “true self” on the internet. *Journal of Social Issues*, 58, 33-48.

[28] Rubin, Z. (1975). Disclosing oneself to a stranger: Reciprocity and its limits. *Journal of Experimental Social Psychology*, 11, 233-260.

[29] Bareket-Bojmel, L., & Shahar, G. (2011). Emotional and interpersonal consequences of self-disclosure in a lived, online interaction. *Journal of Social and Clinical Psychology*, 30(7), 732-759.

[30] Locke, S. E., & Colligan, D. (1986). *The Healer within: The New Medicine of Mind and Body*. New York: E. P. Dutton.

[31] Suler, J. (2004). The online disinhibition effect. *Cyberpsychol Behav*, 7(3), 321-326. DOI: 10.1089/1094931041291295

[32] Markham, A. (2012). Fabrication as ethical practice: Qualitative inquiry in ambiguous internet contexts. *Information, Communication & Society* 15(3): 334-353.

[33] Swain, J. E., Konrath, S., Brown, S. L., Finegood, E. D., Akce, L. B., Dayton, C. J., et al. (2012). Parenting and beyond: Common neurocircuits underlying parental and altruistic caregiving. *Parenting*, 12(2-3), 115-123.

[34] Elliott, R., Bohart, A. C., Watson, J. C., & Murphy, D. (2018). Therapist empathy and client outcome: An updated meta-analysis. *Psychotherapy*, 55(4):399.

[35] Fuchs, T. (2014). The Virtual Other: Empathy in the Age of Virtuality. *Journal of Consciousness Studies*, 21, 152-173.

[36] Decety, J., & Lamm, C. (2009). Empathy versus personal distress: recent evidence

from social neuroscience. In J. Decety & W. Ickes (Eds.) (2009). *The Social Neuroscience of Empathy* (pp. 199-213). Cambridge, MA: MIT Press.

[37] Illouz, E. (2012) *Why Love Hurts: A Sociological Explanation*. Cambridge: Polity Press.

[38] Rifkin, J. (2010). *The Empathetic Civilization*. New York: Tarcher-Perigree.