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Heteroglossic Chinese Online Literacy Practices On Micro-Blogging and Video-Sharing Sites

by

Yi Zhang

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy Second Language Acquisition & Instructional Technology College of Arts & Sciences and College of Education University of South Florida

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Keywords: heteroglossia, carnivalesuqe, computer-mediated communication, Chinese online literacy practices, plurillingualism

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ABSTRACT

This study investigates Chinese online users' adoptions of various languages and other meaning making signs in their online literacy practices in two popular Chinese CMC sites, Weibo (micro-blogging) and bilibili.com (video-sharing). Adopting the theoretical framework of heteroglossia (Bakhtin, 1981), I explore how various meaning making resources are creatively and playfully utilized by Chinese users in their online communication. After two-month data collection, I sampled the non-standard literacy practices (e.g., foreign language transliteration) identified from micro-blogging postings and comments in Weibo, as well as spontaneous (known as "bullet curtain" comments) and traditional text-box comments from featured videos in bilibili.com. The findings resulted in 30,005 non-standard literacy practice types which contain meaning making features from languages (e.g., stylized Chinese Mandarin) and other meaning making signs (e.g., emojis) from both sites. The analysis suggests that Chinese online communication are noticeably hybrid with plurillingual and non-linguistic semiotic resources. These practices reflect the Bakhtinian notion of heteroglossic communication in which people stylize their language use with various meaning making resources. In addition, many practices are also "carnivalesque" (Bakhtin, 1984) which is characterized with creativity and playfulness. The study further deconstructs the notion of multilingualism and extends the discussion of how online communication opens up space for non-conventional and creative literacy practices, which potentially challenge the authoritative policies and voices.

CHAPTER I. INTRODUCTION

Background of the Study

Since the introduction of the Internet in the 1980s, the world has witnessed dramatic growth in the number of Internet users. Today, there are 121 countries and regions that have an Internet penetration rate over 50% (Miniwatts Marketing Group, 2016). While in the 1980s and early 1990s, the majority of the Internet users were relatively limited to those who were trained with specific skills to publish information online (e.g., programmers, web designers, etc.), in the 21st century there has been a spread of non-specialized Internet users and user-generated content and communication. This is largely due to the introduction of Web 2.0 which lowers and removes the barriers for online publishing (Warschauer & Grimes, 2007). Distinguished from Web 1.0 through which people receptively retrieve online information published by groups of trained individuals, Web 2.0 provides platforms for interactive and collaborative production of not only text-based, but also multimodal content which can be published by anyone with rudimentary Internet knowledge. People around the world create and share user-generated information through new types of online interactional mediums such as wikis, blogs, social networking sites, online games and so on. These tendencies have complicated our understanding of online authorship, potential audiences and Internet artifacts (Warschauer & Grimes, 2007).

Along with this rapid development of the Internet and communication technology, computer-mediated discourse practices have gradually emerged in these various Web 2.0 online mediums. Popular Web 2.0 mediums include micro-blogging sites (e.g., Twitter), social

networking sites (e.g., Facebook), video sharing sites (e.g., YouTube) and so forth, which provide multimodal affordances for users of computer-mediated communication (CMC). The Internet and online communication today have been described as the "largest and most complex social space on earth now" which has influenced our way of communication and conceptualization of "repertoire", "knowledge of language" and "language usage" (Blommaert, 2016). In the world of the Internet, traditional literacy practices, such as typing texts of words and sentences, are only one of the meaning making strategies for people to use. Digital discourse consists not only of linguistic forms, but also includes videos, pictures, emojis/emoticons and multimodal advertisements, which are adopted as important means of online communication. These new elements are used to create meaning facilitated by the technological affordances of the CMC platforms. For instance, a Tweet can be posted and reposted multiple times by multiple different users who might add additional information to recontextualize the original post. Using platform-specific communication such as "@", people are able to address other Twitter users; they can also connect their Tweets with specific topics by using hashtags ("#") through which a web of discourse on a similar topic is created. These CMC affordances facilitate various communicative modes which often include multiple languages and multimodal signs, and call for research approaches capable of theorizing linguistic and non-linguistic meaning making practices.

Traditional linguistic approaches to multiple code use such as code-switching and bilingualism tend to distinguish language practices as individual linguistic systems, and often exclude meaning making practices other than linguistic codes. Therefore, they cannot be applied to fully describe and analyze the complex and dynamic online communication in which discourse practices are often constructed through various languages and other semiotic resources such as use of emoticons, graphics, videos, and so on. In order to address the complexity of the

increasingly diverse online discourse practices, some scholars of CMC and sociolinguistics have shifted to Bakhtin's theory of "heteroglossia" (Bakhtin, 1981) for analyses of online interactions. For instance, Gillen and Merchant (2013) explore the heteroglossic features of Twitter interactions by showing how every Tweet and its user can be addressed to the previous post or comment, while also holding potential interactions for future audiences. Moreover, to address the diverse meaning making strategies adopted by online users, Varis and Wang (2011) investigated the uses of various semiotic resources in mainland China. In their study of a Chinese rapper's online activities, they demonstrate the rappers' meaning making resources that include hip-hop stylizations, and uses of English or Romanized letters, all mixed with the local features such as Chinese lyrics. Focusing on heteroglossic communication and the use of diverse semiotic resources, these studies provide in-depth understanding of multimodal online communication in Web 2.0 contexts, and reveal strategies of meaning making beyond pure linguistic features.

The Purpose of the Study

The purpose of this study is to examine the heteroglossic features of Chinese users' online literacy practices. With the development of China's economy and its increasing pace of technological updates nationwide, China has gained a major growth in Internet users. According to China Internet Network Information Center (CNNIC, 2012), the number of Internet users in mainland China reached 538 million by the end of June 2012, which comprises around 39.9% of the entire country's population. This is significant growth in Internet users compared with the data from 2008 when the Internet penetration rate was only 22.6%. Among online users in China, over 53.3% have received vocational or higher education. Besides the enormous population of

online users, the online communication in China is also linguistically dynamic with various regional dialects and writing systems.

The sociolinguistic reality of mainland China is remarkably complex. China contains many spoken dialects and regional variations of writing systems (e.g., traditional and Cantonese styled Chinese characters), which are constantly in tension and negotiation with the institutionally enforced standard Chinese (i.e. Putonghua/Mandarin in speaking and simplified Chinese characters in writing). With China's increasingly influential role in the global economy and the advancement of CMC, the digital environment of mainland China is further diversified with uses of various languages and meaning making signs that call for more detailed descriptions and in-depth analyses. However, only a few studies of sociolinguistics have focused on the online interactions from mainland China with Chinese CMC media (e.g., Chen, 2014; Varis & Wang, 2011; Yuan, 2011). The current study continues this line of investigation.

Based on the concepts of heteroglossia (Bakhtin, 1981), this study will analyze the use of various semiotic resources by Chinese online users, and explore the multifunctionality of these resources facilitated by digital communication. By investigating a sample of online communication from two popular CMC sites, Weibo (a micro-blogging site similar to Twitter) and bilibili.com (a video sharing website), I propose the following research questions:

- 1. What heteroglossic semiotic resources, such as foreign language features and Chinese regional dialects, are adopted by Chinese online users in their online literacy practices?
- 2. What communicative functions, such as demonstration of admiration and euphemisms, are demonstrated by Chinese online users' adoption of semiotic resources?

3. What differences in the literacy practices, such as adopted resources and communicative functions, can be observed between Weibo and bilibili.com?

The semiotic features of Chinese under investigation represent multiple varieties of Chinese, foreign languages, and other multimodal resources. Specifically, the linguistic features of Chinese include stylized Chinese Mandarin (e.g., "我也是醉"了 - Wǒ yěshì zuìle for "I am speechless" with literal translation as "I too am drunk"), stylized dialect-accented Chinese (e.g., "别闹" - Bié nào written as "憋闹" - Biē nào which means "don't be annoying" with the northeastern dialect accent), Romanized Chinese (e.g., "他妈的" - Tā mā de written as "TMD" for expletives like "fuck" with literal translation as "your mother's"), and Chinese radicals (e.g., using the top radical "艹" from the character "草" - Cǎo which literally means "grass" for the meaning similar to "fuck" which is written in Chinese as "肏" - Cào for the shared phonetic feature). Second, two categories of using features of languages other than Chinese are included. They are uses of foreign language expressions (e.g., "GG" for "Good game") and transliterations (e.g., "欧尼酱" - Ōu ní jiàng for "お兄ちゃん" - "O Ni Cha N" in Japanese which means "older brother"). Third, other semiotic resources for online communication will be investigated, which include the uses of emojis (e.g., $(:3 \perp \angle)$ for "being pleasant"), emoticons (e.g., :-) for "smile"), stylized Arabic numerals (e.g., "520" - Wǔ èr líng for "我爱你" - Wǒ ài nǐ which means "I love you"), and orthographic representations of paralinguistic features (e.g., using "hhh" instead of "哈哈哈" - Hāhāhā for laughing). In this study, I qualify these literacy practices as non-standard literacy practices of online communication in mainland China. My intention of using the term "non-standard" does not indicate a prescriptive perspective through which these target literacy practices are considered non-Chinese, ungrammatical, or "wrong". These are in

fact creative adaptations of available meaning making resources and CMC affordances by Chinese users. Nevertheless, these literacy practices are departures from standard language usage regulated by the Ministry of Education since the establishment of People's Republic of China in 1949. Furthermore, although the analytic unit in the current study is the linguistic and other semiotic "features", which may seem to be a corpus focused approach that often involves counting and categorizations, my intention is to examine the meaning making repertoires of Chinese online users and how these "features" are creatively adopted through languages and other meaning making signs as "practices." In other words, the users not only need to be aware of various meaningful "features", but also understand how to integrate these "features" into meaningful and often community specific communication. Therefore, my focus on the Chinese online users' communication is their literacy practices, instead of just features.

In addition to the documentation, description and continued analysis of the linguistic and semiotic features mentioned above, the current study will provide detailed descriptions of the communicative functions (e.g., features for comments, replies and tags, etc.) offered by the two selected CMC sites with contextualized online interactions. In this way, the study demonstrates how these features are interwoven together and applied by Chinese online users. Finally, I will discuss the functions of these heteroglossic semiotic resources and further discuss how discourse practices are facilitated by the digital affordances of the two CMC sites.

The proposed study examines how Chinese online users apply various semiotic resources in their digital discourse practices. This study is significant as it focuses specifically on the literacy practices of Chinese. Choosing to focus on Chinese online users from mainland China expands the research context of sociolinguistic studies of CMC. Although mainland China is a sociolinguistic context with great amount of participation and diversity in language practices in

terms of digital communication, discourse practices of Chinese online users in mainland China are still relatively under-researched with a few exceptions (e.g. Chen, 2014; Varis & Wang, 2011; Yang, 2007; Yuan, 2011). In the hope of encouraging further CMC research in the context of China, this study will strive to offer some insights in the online communication of Chinese users, with a specific focus on two CMC sites originally from mainland China.

Furthermore, the proposed study follows the recent trend in sociolinguistics research that shifts research focus from the variationist approach in sociolinguistics toward a heteroglossic perspective (Androutsopoulos, 2011; Deumert, 2014). It has been argued that the variationist approach has several shortcomings for CMC research as it cannot fully describe and analyze the hybridity of Web 2.0 in terms of multimodality, multilingual language practices, and uses of other semiotic resources such as emoticons (Androutsopoulos & Juffermans, 2014). Androutsopoulos (2011) specifically points out that a language variation approach a) cannot fully capture the often fragmented and multimodal Web 2.0 communication, b) is more suited for analysis within the same linguistic system than multimodal communication and code-switching, c) excludes semiotic features that cannot easily be analyzed as linguistic variables (e.g., emoticons), d) may neglect the less frequent but significant communication features due to its emphasis on quantification, and e) is limited by independent and nonlinguistic variables that may result in excluding other variables emerging from the new media contexts. On the other hand, a heteroglossic perspective adopted by the current study is capable of encompassing CMC users' hybrid repertoires of not only language knowledge, but also other semiotic resources beyond linguistic features such as emoticons. The "semiotic resources" adopted in the current study means "actions, materials and artifacts" used for communication (Van Leeuwen, 2004, p. 285) that can be transformed by people for their own interests (Kress, 2010).

Despite the dynamic online digital communication taking place in contemporary mainland China, there are no sociolinguistic studies that take a heteroglossic perspective on Chinese users' online literacy practices. Thus, the proposed study will fill part of this research gap by adopting a heteroglossic framework on Chinese users' literacy practices on two popular Chinese CMC sites – Weibo and bilibili.com.

Summary of the Chapter

This chapter has briefly introduced the theoretical foundation proposed for the current study, and suggested that using the framework of heteroglossia has various advantages in online communication research over traditional approaches such as code-switching and bilingualism, a point which will be further developed in Chapter 2. The concept of heteroglossia is especially helpful in describing and analyzing the multimodal and hybrid online communication through which people use various semiotic resources in online literacy practices. There is no doubt that uses of various CMC platforms and the Internet have become an influential part of Chinese people's everyday communication. In the proposed study, I intend to investigate online interactions beyond the boundaries of linguistic systems by considering various semiotic resources of Chinese online users for meaning making. In addition, I will describe and analyze the communicative functions of Chinese users' creative online literacy practices. These practices entail the potential for heteroglossic and diverse online communication that involves not only language use, but also the exploitations of other semiotic resources facilitated by CMC. Despite the proliferation of CMC interactions through various platforms, only a few research studies have been conducted with a focus on Chinese users' online literacy practices, especially in mainland China. The existing research on CMC and Chinese has tended to examine the practices

of users from Hong Kong and Taiwan (e.g., Lee, 2007; Su, 2003). Therefore, research gaps still exist in terms of what various semiotic resources are adopted in different types of CMC and how they are deployed by Chinese online users for communicative purposes. The next chapter offers a detailed review of literature on heteroglossia as the theoretical framework of the study and discusses how heteroglossia and uses of diverse semiotic resources have been adopted in research studies on online communication and multimodality.

Definition of Terms

<u>Computer-Mediated Communication (CMC)</u>: A term used to refer human communication via computers (Simpson, 2002). CMC include both synchronous and asynchronous interactions. The former provides real time interactions such as various types of online chatting; the later includes interactions such as emails, discussion forums, and so on.

Dialogism: Bakhtin argues that every utterance in every form and genre is connected to earlier utterances and anticipate potential future responses. This term is further explained in Chapter 2.

<u>Double-voice</u>: Sometimes also referred to as "multi-voice", double-voice was originally coined by Bakhtin. He explains that in literary work, a character as their own voice, but it is also related to other characters' voices. For communication, double-voice suggests that every single voice can be referenced to someone else's words, but with different styles, stances, genres, and so on. This term is further explained in Chapter 2. <u>Heteroglossia</u>: The Russian philosopher, Mikhail Mikhailovich Bakhtin, coined this term which means an other's utterances (Bakhtin, 1981). In other words, we do not simply "create" speech, but rely on other people's speech on which we build our utterances. For Bakhtin, heteroglossia is key for communication, through which multiple voices, styles, genres, and so on are exploited from various people.

<u>*Carnivalesque*</u>: Bakhtin (1984) defines "carnivalesque" as a literacy mode which is subversive towards the assumed dominant style through humor and chaos, which ultimately represents the pursuit of emancipation of expression.

Literacy Practice: Barton and Lee (2013) describe the term as the common patterns in reading and writing through which people infuse their cultural knowledge into an activity.

<u>Semiotic Resource</u>: Van Leeuwen (2004) defines semiotic resources as "actions, materials and artifacts we use for communicative purposes, whether produced physiologically... or technologically... together with the ways in which these resources can be organized" (p. 285). Jewitt and Kress (2010) suggests that people also transform semiotic resources purposefully for their own needs.

<u>Multimodality</u>: The CMC text that is constructed with graphics, videos, and/or audio through the Internet (Herring, 2002). The graphics can be two or three dimensional and multimodal interactions are often featured with broadcast media that involves other users and audiences.

<u>Polycentricity</u>: A term that refers to the conceptualization of authority and power in the environment of human interactions (Blommaert, 2010). Polycentricity suggests that norms for interactions are multiple instead of monolithic or static, and people orient to these norms as various "centers" in meaning making interactions while indexing authority. In other words, we interact with each other under the consideration of various evaluative authorities depending on the social context. These authorities are "centers" toward which we orient our interactions. This term is further explained in Chapter 2.

CHAPTER II. LITERATURE REVIEW

In this chapter, I begin by introducing the theoretical framework of heteroglossia (Bakhtin, 1981) adopted for the proposed study. Specifically, this chapter provides the explanation of heteroglossic communication and a detailed review of literature on previous studies of heteroglossic features in online interactions, such as dialogism, double-voicing and "carnivalesque" literacy practices, and their role in facilitating creative and playful online communication. I will also describe the diverse linguistic landscapes of Hong Kong and mainland China, and discuss earlier studies that focus on how various semiotic resources are utilized in various online media by Chinese users.

Theoretical Framework

Digital communication is known for its hybridity due to elements such as multimodality and multi-authorship (Tagg, 2015). This hybridity is intensified by the spread of the Internet which allows individuals to communicate despite their geographical limitations, and interact with others transnationally. Early studies on the use of multiple languages in online contexts addressed this topic from the perspective of "code-switching" (e.g., Androutsopoulos, 2006; Deumert & Masinyana, 2008; Fung & Carter, 2007) and "code-mixing" (e.g. Cheng, 2002; Lee, 2007). However, as many of the same researchers discovered, the notion of "code-switching" cannot fully capture the hybrid features of digital communication mentioned above, as other modes of meaning making strategies, such as use of emoticons, are not sourced from

conventional linguistic features. More research efforts have been called for to investigate the less researched online communication contexts, such as mainland China, and the roles of various language knowledge and other meaning making resources in users' online literacy practices. To address the shortcomings of traditional research approaches, the perspective of heteroglossic communication (e.g., Androutsopoulos & Juffermans, 2014) is adopted in the current study to contribute to the concept of theorizing language practices and uses of semiotic resources online as remarkably fluid. The computer-mediated discourse practices are fully compatible with this concept in the sense that they are multi-faceted in terms of technological medium and contexts (Herring, 2007), and often entail multi-authorship and use of multiple semiotic resources that construct communication with great heterogeneity and diversity. In recent years, multiple research inquiries of CMC have adopted the heteroglossic approach, or reflected notions of heteroglossia, in their findings (e.g., Androutsopoulos, 2006 & 2010; Deumert, 2014; Gillen & Merchant, 2013; Leppänen, Pitkänen-Huhta, Piirainen-Marsh, Nikula, & Peuronen, 2009; Squires, 2011; Tagg, Baron & Rayson, 2010). In the following section, I will focus my discussion specifically on the concept of heteroglossia and the roles of heteroglossic features in studies of CMC communication.

Heteroglossia and Heteroglossic Online Communication

A heteroglossic view on language practices suggests that all utterances are inherently dialogic in the sense that every utterance occurs within a larger context that not only connects to previous utterances but also to future responses (Bakhtin, 1981). According to this view, people do not simply produce their speech, but rely on previous utterances and incorporate them into their social practices featured by individual choices of style, register, genre, and so as called

upon by context. Each utterance is always a little different from its previous uses. As a result, the same utterance is then produced with differences (Pennycook, 2007), and can be used in an innovative and playful way (Deumert, 2014).

The concept of heteroglossia was first introduced by Mikhail M. Bakhtin (1935), a Russian literary critic and language philosopher. Bakhtin (1981) theorized heteroglossia as the coexistence and ever-changing ways of how individuals use communicative resources of language(s). Heteroglossia, or in another words, multiple voices, is referred to as the property of any utterance to have a different meaning as the context changes physically, socially and historically. In other words, a heteroglossic view focuses on language-in-use, which challenges the formalist linguistic concept that categorizes language as an abstract "system." Bakhtin critiques formalist understandings of language for being hegemonic in that they limit or denies speech that does not conform to the proposed authoritative system. For Bakhtin, the meanings of words and sentences are shaped through the actual language-in-use, and the nature of speech is dialogic in the sense that utterances are constructed by multiple voices (Bakhtin, 1986).

Dialogism, often referred to as double-voicing or polyphony, suggests that each utterance is produced with multiple voices which are not the speaker's own; these voices are exploited by each individual speaker through various accentuation, style, register, genre and so forth, often in a ludic and innovative way (Bakhtin, 1984). In this way, all utterances bear a certain level of differentness when produced by different individuals. These utterances are realized in an ongoing contextualized chain of interactions that are connected to previous statements as well as potential future responses. The heteroglossic language ideology directly opposes the "monologism" concept that proposes an abstract and systematic perspective which dominates individual interpretation of discourse practices.

However, the meanings of utterances cannot be boundless, as people attend to the immediate addressee (i.e., the listener, no matter how many there might be), and a third authority referred to as the "super-addressee" by Bakhtin (1986). This third party represents the third listener as the evaluative authority who sanctions the acceptability of produced utterances under various ideologies, pragmatic rules and so forth. For example, in an online discussion forum, the author of a text can directly address his/her speech to the immediate addressee (i.e., the "second person"). But the author is also aware of the other potential "listeners", though not directly addressed, of the forum, as well as the acceptability of the speech regarding the interactional context. Moreover, heteroglossia holds a historical view on language practices as intertextual in the sense that utterances of here-and-now are always derived from previous history of their uses. Therefore, language practices are inherently connected to the past uses historically, current immediate statement, and possible future responses. To interpret an utterance, one has to understand how it was used with prior meanings. In this way, a heteroglossic view on language bridges the past and present uses of every utterance. The features of utterances discussed above also apply to online communication. Similar to the literary work and face-to-face dialogues, online interactions are dialogic and constructed with multiple voices colored by various exploitations of genres, styles, registers, and so on. In fact, the spread of CMC and the Internet potentially offers a great variety of social spaces for dialogic interactions thanks to the technological affordances such as multimodal communication.

Taking a heteroglossic perspective is compatible to research on CMC communication as digital contexts often foreground dialogic relations and intertextual connections (e.g., Vásquez, 2015). Androutsopoulos (2011) specifically points out that "heteroglossic relations can be manifested at different levels of linguistic and textual organization, and such relations can

coexist, owing to the convergent, multimodal, and multi-authored structure of Web 2.0 environments" (p. 284). These features have been discussed with respect to text-messaging (e.g., Squires, 2007 & 2011), micro-blogging such as Twitter (e.g., Gillen & Merchant, 2013; Lee, 2011), social-networking sites such as Facebook (e.g., Jones, Schieffelin & Smith, 2011), and video-sharing sites such as YouTube (e.g., Androutsopoulos, 2010). Participants in online discourse practices are always connected with potential audiences of the CMC context while commenting on multimodal texts such as posts, messages, photos and videos.

Another element of heteroglossia in digital communication is the ludic feature of online communication (Deumert, 2014; Tagg, 2015). Starting with the earliest networking platforms, users of text-messaging have frequently applied playful chatting style while exploiting the technological affordances such as capitalizations, emojis/emoticons, and purposeful creative spellings. This is essentially heteroglossic as utterances are altered often in a playful and innovative way (Bakhtin, 1984).

Multimodality is one type of digital affordance and is creatively adapted by online users. For instance, the feature of multimodality is observed in micro-blogging sites in which posts and comments are interconnected visually through technological affordances. In their study of Twitter, one of the most popular micro-blogging sites, Gillen and Merchant (2013) investigated the heteroglossic nature of user comments. The researchers argue that each tweet, when posted, enters a discursive web of utterances which not only addresses to the previous post or comments, but also anticipates future audience's responses. What makes this dialogic communication different from offline interaction is that the dialogic feature is displayed more obviously in the way that Twitter allows users to participate in various discursive discourses by physically typing "@" to specify the intended addressee and "#" (hashtags) followed by keywords that will

connect the user to other conversations and websites that include similar themes. One single Tweet can involve other Tweets and Twitter users, creating the multi-authored discourse. Each Tweet, therefore, bears the potential of double-voicing, through which the bridging of the past and the future utterance becomes visible, and in the case of Twitter, conventionalized with specific input features of "@" and "#" online. The multi-layered and multimodal constructions of languages and signs that attend to the online users' sociohistorical associations are in line with the heteroglossic view on digital discourse practices and are always at work in digital communication. The multimodal features of online interactions found on Twitter inform the proposed study, as Weibo is also a micro-blogging site that shares similar multimodal affordances. Therefore, Chinese users' interactions on Weibo potentially bear the dialogic features of online communication.

As an important characteristic of digital communication, heteroglossia provides an appropriate theoretical framework for describing and analyzing data from digital communication. A heteroglossic view opposes treating literacy practices involving multiple languages as separate "systems" implied by conventional research on code-switching and bilingualism. For instance, Chen (2014) found in that Chinese CMC users adopt various meaning making strategies, such as using Romanization of Chinese characters, Chinese homophones, and various emojis and emoticons in their online literacy practices. These meaning making strategies are adopted from a combination of various semiotic resources such as Latin alphabet, the Chinese Pinyin system (the pronunciation system of Chinese), and graphic and orthographic representations of emotions and feelings. By adopting these semiotic conventions, Chinese CMC users are able to utilize various language knowledge and CMC affordances in online communication. In this way, a heteroglossic view on online literacy practices reflects the intertextuality of online communication and also highlights innovative and playful utterances represented through features of multimodality.

Research of Heteroglossic Online Communication

Studies on heteroglossic online communication have been conducted on various digital contexts including discussion forums (e.g., Leppänen, Pitkänen-Huhta, Piiraine-Marsh, Nikula & Peuronen, 2009), text messaging (e.g., Deumert & Masinyana, 2008; Thurlow & Brown, 2003), instant messaging (e.g., Lee, 2007; Squires, 2007), micro-blogging sites (e.g., Gillen & Merchant, 2013; Ogola, 2015), social networking sites (e.g., Deumaert, 2014; Lenihan, 2011), video sharing websites (e.g., Androutsopoulos, 2010; Androutsopoulos, 2013a), and online reviews (e.g., Vásquez, 2014). Some scholars have also specifically investigated heteroglossic features of online learning and language socialization (e.g., Thorne, Black & Sykes, 2009; Oztok, Wilton, Lee, Zingaro, Mackinnon, Makos, Phirangee, Brett & Hewitt, 2014). These studies cover a wide range of research foci, including the negotiation of identity, convergence of local knowledge, and pragmatic strategies of using linguistic and semiotic resources in various communicative contexts. The online interactions produced through these CMC mediums reflect features of heteroglossic communication such as dialogism, double-voicing, adaptation of multimodality, and creativity and playfulness. The following sections provide an overview of some key CMC studies that reflect these communicative features.

Dialogism in Online Communication

One of the key features of heteroglossic online communication is dialogism (Bakhtin, 1981). Distinguished from the concept of heteroglossia, which emphasizes that every utterance we produce is exploited from other's speech, dialogism suggests the dialogic nature of speech which is always connected to some earlier statements and future responses. In other words, our

speech is always involved in chains of interactions. For CMC, a dialogic view suggests that interactions on Web 2.0 encourage the users to construct their utterances both pertaining to previous utterances but also future responses from potential future audiences. In other words, utterances produced online publically are not only picked up by the immediate addressees, but also other accessible CMC users. Online platforms such as Facebook and Twitter offer online spaces in the sense of a discursive web of discourse which is able to connect different users and user-generated content.

Through a dual-ethnography approach carried out over one year by two academic Twitter users, Gillen and Merchant (2013) investigated the heteroglossic features of the literacy practices found in Twitter. The researchers provide a detailed account Twitter and how it facilitates users' communication through various Tweeting forms (e.g., Tweetdeck) and devices (mobile phones). Through the operationalization of various Twitter features such as message actions (e.g., Tweet), message conventions (e.g., "@"), and other elements (e.g., profile avatars), they focus specifically on the addressivity and coherence on Twitter. They argue that micro-blogging sites such as Twitter provide different layers for addressivity through Twitter interfaces (e.g., the "What's happening?" prompt) and online users themselves as their posts and comments are viewed and commented on by other Twitter users. In Bakhtin's view, addressivity is the constitutive part of utterance without which utterances cannot exist (Bakhtin, 1986). What is more, the CMC affordances such as "@" and hashtags (i.e., "#") mean that once utterances enter Twitter, they are embedded in a web of discourse in relation to other Tweets and potential future audiences. Therefore, communication on Twitter is fluid instead of static, and changes with various levels of participation and exploitation of microblogging activities represent various professional and political purposes as well as simply for fun or showing one's well-being. As the

Chinese micro-blogging site, Weibo, shares similar CMC affordances of Twitter such as "@" and hashtags (i.e., "#"), I expect to observe similar dialogic online interactions from the proposed study.

Lee (2011) reveals the dialogic features of Facebook postings by investigating 20 Cantonese-English bilingual Facebook users in Hong Kong. Adopting a virtual ethnographic approach, 744 status postings were collected in six months along with online interviews and observations of user profiles. The posts were coded according to the general communicative functions and message languages with multiple readings of the data for emergent themes. Of the eleven functions coded from the Facebook postings, the researcher found that most of the posts were not monologic, but were discursively embedded in the semiotic field of Facebook communication for interactions. One post could be designed to relate to specific target readers by sharing quotes, communicating with an individual person or a group of people, or simply initiating discussion or feedback. For example, a Facebook status such as "take care my love" is addressed to a specific audience, while a status such as "Is there anything we could do for the Haitians? The whole country is RUINED now ... " can function for eliciting feedback and discussions. These examples demonstrate that a seemingly monologic Facebook update can be interactional and relational. Once a status update is posted, it is accessible for other Facebook users who are intentionally addressed as the direct "addressee" or for more general audiences as "overhearers" or "eavesdroppers" (Bell, 1984, p. 159). This discursive feature of Facebook is also expected to be observed in the proposed study, as Weibo and bilibili.com are both public CMC platforms. Similar to Facebook, posts on both sites inevitably enter a discursive web of discourse that are potentially interactional and relational.

This dialogic nature can also be found in other types of digital communication, which often reflect features of double-voicing. Bakhtin (1981) explains double-voicing as how each utterance can be referenced to someone else's words with new meanings characterized in terms of styles, stances, registers, genres, and so on. In other words, people do not simply "create" speech; instead, we are constantly sourcing from others' speech (i.e., heteroglossia) and fabricate our own voices into it in order to form our own utterances. We accomplish the double-voicing or multiple-voicing in our choices and manipulations of styles, stances, registers, and so forth. For example, Squires (2011) studied an incident of "text message scandal" between the Detroit Mayor and his chief staff in 2008. She analyzed how the "sexy texts" were perceived and manipulated through various parties, including newscasters, the text authors, and other actors. 130 excerpts read by the newscasters were collected and compared with the original texts from the text authors, ending up with 75 unique excerpts. The study addressed how these messages were represented and interpreted in terms of ideology, genre, and style. The original voice (i.e., the actual text messages between the Mayor and his chief staff) was exploited and presented by various parties in various manners. The researcher found that emblematic features such as punctuation and capitalizations were purposefully included, omitted, or changed in the reporting of the original texts, resulting in polyphonic communication with various voices. This dialogic discourse took place as the original authors' voices (i.e., the original texts produced by the Mayor and his chief staff) were being constantly changed by different "animators" (i.e., TV newscasters), a term by Goffman as the "sounding box" (Goffman, 1981, p. 226) through which the utterance is made. The voicing of the animator further indexes the preferred choices of genre and style of public mass media as standard, formal/written, and interactive. In this way, the original utterances went through a process of "multi-voicing" through which new meanings were

inserted, resulting in the multi-voiced and multi-authored discourse practice. The meanings of text messages were therefore altered as they were realized through a different medium.

Moreover, the study by Jones et al. (2011) also reveals double-voiced communication through an analysis of American teenagers' online gossip. Between 2006 and 2007, a total of 719 instant messaging (IM) conversations were collected from 96 users (college freshman and middle-class high school students). The researchers found that these teenagers transferred various materials from one digital communication platform (i.e., Facebook) to another (i.e., instant messaging), and reframed their observations of others' online activities into the gossipstyled stories they created in another platform. These IM and Facebook interactions are characterized by a polyphonic style. First, IM is represented as a separate genre with conversational features and is treated as a form of "talk." Verbs such as "talk", "yell", "speak" and so on are constantly adopted by IM users. Second, the IM users project affect by using various meaning making strategies such as using punctuations, capitalizations and so forth in their messages. Additionally, polyphonic communication style is frequently observed as IM and Facebook users adopt reported speech and "constructed dialogues" (Tannen, 1986). For example, teenage IM and Facebook users often adopt the "be + like" structure to show their stance and aspect in their narratives and assessment of morality. The various meaning making strategies mentioned above are likely to be adopted by Chinese online users as well. For the proposed study, I expect to identify and discuss similar metalinguistic practices on both Weibo and bilibili.com.

To sum up, online interactions in various CMC platforms demonstrate features of dialogism and double-voicing theorized in heteroglossia. Users of CMC mediums such as Twitter, Facebook and Instant Messaging are constantly involved within discursive interactions

with others. What is more, CMC further facilitates heteroglossic communication as Web 2.0 offers a wide variety of multimodal features to assist online interactions. I now turn to showing how online users construct their meaning through multimodal features offered by CMC.

Meaning Making through Multimodality

Some research on online communication has focused on the multimodality in digital contexts. Multimodality is the combination of various semiotic modes in the meaning making process (Kress & van Leeuwen, 2001). It encompasses both spoken and written language, images/photos, sounds (e.g., recorded voices), and videos. Multimodal features, such as voice chat, and avatars' gestures in online computer games (e.g., Newon, 2011) further shape online communication. These multimodal features are often deployed and interpreted with layered complexity, including using various features of language(s) and adaptation of different multimodal interfaces. In terms of literacy practices in a multimodal digital context, a heteroglossic research agenda is particularly helpful in explaining how individuals utilize all of the available resources and technological affordances in their discourse practices. These discourse practices are not limited by the set categories from language variations, but are sourced from "the social and pragmatic functioning of language" (Bailey, 2007, p. 262). In this way, the notion of heteroglossia also calls for the reexamination of the concept of multilingualism/polylingualism and the shift of focus to how individuals use various linguistic and semiotic resources in their literacy practices.

Androutsopoulos (2010) provides an example for heteroglossic online communication through multimodal digital discourse in his analysis of YouTube videos produced with a strong sense of localness by the choices of dialects, images, lyrics, and so on. Two YouTube videos were selected with the "Bavarian" (a German dialect) tag, and each video was composed of

globally circulating pop culture, one themed with "McDonald's" and the other with the song "Umbrella" by Rihanna (a famous American singer). Both videos were redesigned and recontextualized into a "Bavarian" style. The multimodal mixing of the Bavarian dialect, change of lyrics, and uses of still images (e.g., a beer mug in the German version of "Umbrella," spelled as "An Preller" for humorous effect based on near-homophony of the two codes) all contribute to the local German identity. The researcher discussed the technological multimodal interface (i.e., YouTube), including comments and advertisements, which further complicates the heterogeneity of online communication on which users may choose to converge or diverge from the localness by their choice of languages in their comments. In this way the video content is socially constructed while utilizing the available resources to entail pragmatic functions of local identity. Through these strategies, heteroglossia appears as the tension between the globally circulating pop culture and its localized uptake.

Furthermore, Androutsopoulos (2013a) further explores various semiotic resources on YouTube by investigating 310 videos with dialects from six regions of Germany (i.e., Bavarian, Swabian, Badenese, Palatinate, Berlin city, and Low German dialects). He specifically focuses on the users' construction of genres and ways of engagement to the videos through comments, and the comparison of two videos that index Berliner identity. Focusing on the multimodal features of YouTube, the researcher investigates the website users' utterances, relations between video contents and user comments, and other multimodal contents such as the user interface, advertisements, and institutional content. The findings suggest that these dialects, when performed on YouTube, are open to various voices in the comments and are constantly challenged and re-explained by various viewers. The researcher concludes that many participatory CMC contexts, such as YouTube, are semiotically hybrid with the inclusion of

audio and visual contents in addition to written texts, creating multimodal meaning making spaces for online users.

Similarly, Leppänen et al. (2009) adopt a heteroglossic perspective in their analysis of Finnish adolescents' language choice through their utilizations of new media. Adopting a multiperspective framework of translocality, language choice and heteroglossia, researchers focused on four case studies on young Finns' perception and use of new media. Using an ethnographic approach, the study investigated language choice in various media including web writing, gaming and discussion forum. The researchers argue that CMC plays an important part in young Finns' daily life, and the language choices are often heteroglossic as the Finnish adolescents intentionally change their languages, styles, and genres to appeal to various locales and communities. In addition, in the last case of the two discussion forums for young Christians, while English is frequently used for specific terms in sports, it is embedded within Finnish orthography and morphology. Accordingly, the researchers argue that adopting both English and Finnish strategically in this case represent the double-voicing of Christianity and youth culture.

Investigating a similar linguistic context, Peuronen (2011) studied a particular online Finnish community of extreme sports composed of Finnish Christians and called "Godspeed." The forum's name reflects both themes of Christianity and extreme sports, and the form provides sections for various extreme sports (e.g., climbing, motor sports) as well as religious activities (e.g., Bible discussions and sermons). A total of 205 discussion threads from August 2006 to March 2008 were collected from 79 registered users along with ongoing online ethnographic observation. The researcher discovered various playful and creative styles applied by forum users. They creatively prolong the affirmative exclamations extracted from the global "hip-hop" culture and purposefully use English within their Finnish discourse for playfulness. For example,

a forum member used "jojojojoooooo" as affirmative exclamations at the beginning of the post. It not only reflects prosodic spelling with repetition and lengthening of the vowel for "yes" in Finnish, but might also index the popular hip-hop slang such "yo" (Pennycook, 2003). In addition, by calling each other "brothers and sisters," the forum members might also have adopted the similar style for address in hip-hop culture. On the other hand, religious verses are also borrowed and re-designed to claim the purposes of the community for extreme sports enthusiasts. For instance, a forum member wrote in a post "A snowboarder to snowboarders, a skater to skaters, a motorist to motorists, a motorbiker to motorbikers... It's our mission. In order for us to win at least some to the Lord." The style is adapted from a quote in the 1938 version of the Finnish Bible translated by the researcher. The author adopts a preaching style to illustrate their mission and purpose of the forum and community, connecting Christianity and extreme sports. These forum users stylize their discourse through localizing the global language (i.e., English in this case) along with Finnish in their discourse, and construct their identities by adapting the registers and genres from various domains of cultural knowledge referenced in their online communication. This study is especially informative to the proposed research, as the video-sharing site – bilibili.com is also constructed with theme based videos and is influenced by Japanese comics and animation culture. It is expected that users of bilibili.com might apply both Chinese and Japanese in their literacy practices while projecting expertise towards various cultural knowledge (e.g., Japanese animation).

Finally, Kytölä and Westinen (2015) studied the use of "gansta" English in Twitter and a Finnish football web forum. The researchers investigated the use of non-standard English of a Finnish footballer Mikael Forssell and his writing styles in reference to hip hop and rap culture on Twitter, as well as the writings and reactions of two other white middle-class Finnish

footballers and other online users on a Finnish soccer web forum. The findings point to a style of "gansta" English influenced by the hip hop and soccer culture, and how online users elicit normativity and (in)authenticity through meta-discourse constructions (e.g., using "I be" instead of "I am"). The findings exhibit Forssell's often humor-intended stylization of "gansta" English and the contrastive attitude of users from the soccer forum who debated the inauthenticity of "gansta" style in relation to Forssell as a white pro-athlete. The researchers further argue that authenticity is negotiable and discursive depending on the social actors as they determine others' legitimazation or grouping. In addition, normativity in informal social media is often co-constructed through a bottom-up process. This study highlights the unpredictability of language use in relation to popular culture, ethnicity, country of origin, among others, in a superdiverse world.

While multimodality enriches the forms, styles, genres, and so on of user-generated content in CMC, it also offers opportunities for creative and playful online interactions. CMC users frequently utilize various semiotic resources in their construction of online literacy practices, resulting in creative and playful communication, or what Bakhtin (1984) refers to as "carnivaleque" human interactions.

Creativity and Playfulness in Online Communication

In addition to the multimodality of heteroglossic online communication, some research focuses specifically on the creativity and playfulness of digital communication. Bakhtin (1981) suggests that language-in-use is often ludic in the sense that contextualized uses of utterances are often creative and playful when appropriated from the others. Here, creativity does not mean people "create" language knowledge and language use out of nothing; it means how individuals color other's speech with their own rendition of styles, registers, genres and so on as the key

concept of heteroglossia. At the same time, the notion of playfulness, which is often presented through multiple voices and styles, is similar to the Bakhtinian notion of "carnival" (1984) that emphasizes playfulness and laughter through which people seek for enjoyment, humor, and ultimately freedom. This notion of freedom is often demonstrated in a vulgar or "grotesque" way (Bakhtin, 1984) that is subversive towards authorities and control. Expletives are often adopted in CMC (e.g., Chen, 2014) and authorities are frequently ridiculed or played with (e.g., Wang, Juffermans & Du, 2016). In CMC research, features of both creativeness and playfulness have been acknowledged and analyzed.

First, features of creativity have been discovered in studies on text-messaging languages, as mobile phone users often engage in texting conversations with creative spellings. For instance, Tagg et al (2010) revealed various ways of Short Message Service (SMS) spelling in their study on British English speakers aged from 19 to 68. After approximately three years of data collection from friends and family, a corpus of over 11,000 SMS texts were collected. The researchers found that although spelling variations appear far less than normally assumed, various spelling strategies were applied by SMS users, including uses of single letters (e.g., "u" for "you"), homophones and number homophones (e.g., "2gether" for "together"), clippings (e.g., "tomo" for "tomorrow"), apostrophe omission (e.g., "im" for "I'm"), eye dialect (e.g., "luv" for "love"). The researchers found that though at first glance, many of these spelling choices are due to concerns for brevity and speed, other motivations were also considered. For example, the fact that some users chose "ya" over "u" for the meaning of "you" suggest that they attempted to index a more informal and casual effect. This instance is creative as the phonological features were adopted in a pragmatic purpose for intimacy. Therefore, while creatively utilizing various non-standard spelling strategies, the user adaptation of SMS interactions can also be purposeful.

Besides variations of spellings, the online context also seems to provide spaces for other creative and playful literacy practices. For instance, Deumert (2014) provides an overview of the playfulness and creativity of online communication by investigating a collection of data from Internet Relay Chat (IRC), Twitter, Facebook, and MXit (a South African instant messaging service). Various playful acts such as mock-languages, language mixing, gangster slang, emoji composed with letters and signs, and acronyms were deployed by users of the target CMC mediums. In addition, Deumert observed that these discourse strategies adopted demonstrate not only features of playfulness, but also a "grotesque" reality (Bakhtin, 1984) through which politeness is altered for vulgarities (e.g., insults and sexual terms). This feature is also observed in Jones et al (2011)'s study on Facebook stalking and gossips, as interactions on Facebook are often charged with moral assessment and sexuality. Interestingly, Deumert (2014) discovered that these vulgarities are often taken lightly by online users. She further suggests that digital communication seem to offer spaces with a ludic orientation through which online communication are frequently played with and/or ridiculed.

Moreover, this "carnivalesque" dimension of heteroglossic online communication has also been found in Chinese online communication. Chen (2014) discovered the extensive uses of taboo expressions in his study of young Chinese online users. The researcher investigated the use of Pinyin (Chinese pronunciation system) acronyms, initials of Romanized Chinese words, the communicative functions of acronyms, and whether these discourse practices are conventionalized or extended to other domain of language use. By administrating an online survey focused on uses of acronyms online, the study collected 157 responses from young native Chinese speakers (younger than 33) through Qzone and Renren, two popular social networking sites similar to Facebook. A further detailed analysis revealed three main types of acronyms:

insults, sexuality-related phrases, and politically sensitive phrases. Profanities frequently appear in young Chinese users' online discourse. Similar to the study by Deumert (2014), the researcher also observed that these taboo language practices, such as insults and sexuality-related phrases, are usually taken lightly by other online users when presented in Pinyin acronyms. Therefore, using Pinyin acronyms instead of the original expressions with Chinese characters is likely to be adopted as a softening strategy. This finding is also compatible with Tagg et al (2010)'s study of spelling conventions found in SMS texts, as the literacy practices adopted by Chinese online users might be purposeful (e.g., softening insults) beyond the consideration of input simplicity and brevity compared with the uses of standard Chinese characters.

Also focusing on the uses of acronyms, Wang et al. (2016) investigated the "politically sensitive acronyms" to demonstrate how younger generations of Chinese online users avoid the government's online censorship and seeks out free online discourse practices. The researchers specifically focused on the use of "harmony" in China, a historical term with positive traditional value, which has been adopted by the Chinese online users in non-normative language practices. Using an ethnographic approach, the researchers first discuss the macro context of the online policy in China and the historical meanings of the term "harmony." It is argued that the meaning of "harmony," a significant Confucian ethical concept, has been explicitly utilized by the Chinese government as a political discourse for the "rationalization, maintenance and enforcement of stability and order" (Wang et al., 2016, p. 300). However, the researchers found that in online spaces, "harmony" has been reinvented into "language harmony" in accordance with the stringent online censorship of the virtual world. Paradoxically, Chinese online users have responded creatively by using forms such as "river crab" (a homophone for "harmony" in Chinese) to avoid and

challenge the "language harmonization" policing of the virtual world. Furthermore, Chinese online users venture beyond linguistic resources, and adopts graphics to accommodate CMC multimodality. For instance, in Figure 1 below, a picture of "grass mud horse," which is symbolized as an alpaca, is depicted eating a "river crab" to demonstrate resistance towards the Internet policing. Through this graphic, Chinese online users illustrate how using vulgar expletives (i.e., "fuck your mother") in the form of an alpaca "eat up" online harmony (i.e., the "river crab") proposed by the Internet police.



Figure 1. "Grass mud horse" swallowing "river crab" (http://kahnlei.blog.sohu.com/147096077.html), adopted from Wang et al (2016, p. 313)

In this way, online users of Chinese draw upon various semiotic resources and linguistic creativity to reconstruct varieties of language practices limited or denied by the institutional censorship. Commonly adopted literacy practices include discourse reconstructions of characters, homophones and jokes, which are facilitated by the Internet with various meaning making strategies such as graphics and sociocultural symbols (e.g., Using the alpaca as the symbol for "fuck your mother"). In this way, the effort of "harmonization" of online language policy has, in fact, encouraged language practices that could be considered as dis-harmonious. In other words, Chinese online users have demonstrated their subversive attitude towards the Internet control and governmental authority, an example of the "carnivalesque" features in heteroglossia.

The studies reviewed above focus on various heteroglossic features of online communication as dialogism, double-voicing, multimodality, creativity and playfulness. These features are constructed through online users' discourse practices, and are skillfully applied by individuals who practice in different CMC mediums and/or from different sociohistorical backgrounds. These digital users usually have various digital literacies that allows them to participate in the discursive web of communication, deploy various linguistic and semiotic resources, construct diverse identities, utilize multimodal CMC affordance, negotiate space for language choices, or simply being playful and seek for "fun." The digital world, as argued by various scholars of sociolinguistics and CMC, provides discourse spaces for the communicative features discussed in this section. In the following section, I shift the focus to the uses of various linguistic and other semiotic resources in digital communication and online communication research of Chinese users.

Using Diverse Semiotic Resources in Digital Communication

Further complicating the theorization of digital discourse practices, the globalization process and spread of the Internet has gradually intensified the level of diversification of the world in terms of labor market, semiotic resources, communities, and language uses (Blommaert, 2010; Vertovec, 2006). This diversification is particularly facilitated by the advancement of digital communication which provides translocal and transtemporal spaces for communication and allows individuals to maintain the ties with their countries of origins. This factor further contributes to situations in which some individuals might have "bits" of multiple languages (Blommaert, 2010) in their linguistic repertoire. With the help of digital communication through the Internet, people are able to communicate online regardless of the limitations of different geographical locations. In this way, literacy practices online become increasingly complex and fluid with various linguistic and semiotic resources accessible to individual users. The notion of "bits" of languages (Blommaert, 2014) challenges the static view on language practices such as code-switching and bilingualism, as knowledge of language and language use become more diversified with online communication. Lee (2017) also argues that in the online context, one can use "parts" or "pieces" of a language that he/she does not actually "know". Nowadays, it is difficult to identify one's language repertoire in a distinguishable manner in terms of nationalities and/or immigrant communities. Digital communications are no longer constrained within individuals' socialization with specific cultures or countries; rather, people are able to communicate translocally through which various meaning making resources are encountered, utilized, and recirculated. Furthermore, this translocalization of resources through online communication are constantly "recontextualized" (Androutsopoulos, 2010) for new meanings when exploited translocally.

In sum, digital communication removes the limitations of geologically defined space (Kroon, Blommaert, & Jie, 2013), and allows linguistic and semiotic resources to be adopted more flexibly through various CMC contexts. Androutsopoulos and Juffermans (2014) argue that it is almost impossible to ignore digital communication in the study of the relation between language and individuals in today's world. A focus on digital communication can shed light on how individuals manage their linguistic repertoires to appeal to their audience, often through heteroglossic constructions involving different languages and symbols. Research on various

linguistic and other meaning making resources in digital communication has started to gain more academic attention in recent years, including research in digital communication contexts such as social networking sites (e.g., Belling & De Bres, 2014), new genres such as Japanese comics (e.g., Jonsson & Muhonen, 2014), and in a variety of different languages (e.g., Fabrício, 2014; Juffermans, Blommaert, Kroon & Li, 2014; Lee, 2016; Varis & Wang, 2011). These studies illustrate the diversity and complexity of digital communication with analysis of various layers of linguistic and semiotic resources adopted by CMC users. The following section specifically reviews the prior research on online communication of Chinese users, which is the focus of the current study.

Using Various Semiotic Resources in Chinese Online Communication

One of the many emerging research strands on digital discourse practices in a diverse context is the investigation of how Chinese users engage with linguistic and semiotic resources to both respond to and create diverse online environment during the process of globalization (Dong, Du, Juffermans, Li, Varis & Wang, 2016; Kroon et al., 2013; Varis & Wang, 2011). As a native language of over a billion people, Mandarin Chinese is the official spoken language of People's Republic of China and Taiwan, and is one of the official languages in Hong Kong and Singapore (Chen, 1999). Speakers of Chinese are also geographically widely spread across the globe through migration both within mainland China (Dong, 2011; Dong & Blommaert, 2009) as well as throughout the rest of the world (Blackledge & Creese, 2010; Dong & Dong, 2013; Li, 1994 & 2011). However, the concept of "the Chinese language(s)" has always been a polycentric one (Blommaert, 2010; Dong et al., 2012) through which norms are often shifted, such as choices of dialects, in different social contexts. Blommaert (2010) further argues that the environment for human interactions is never static or monolithic, but involves various competing

and/or complementary polycentric norms. In this way, "linguistic resources enter a specific environment, acquire an indexical value relative to existing norms within that environment, thus shape new norms, and so acquire a potential to perpetually reshuffle the linguistic-symbolic hierarchies" (Blommaert, 2013). This is especially relevant in the sociolinguistic context of mainland China.

The concept of Chinese involves multiple variations that include a variety of languages, dialects, and writing systems. This linguistic reality is complicated by globalization processes through which the Chinese language(s) are increasingly influenced by the Internet communication, spread of (varieties) of English, circulating globalized pop culture, and Romanization of languages in digital communication (Kroon et al., 2013). In addition, since Chinese is constructed logographically instead of alphabetically, the online input system and semiotic environment have also been modified for the Chinese characters and the hybridization of them and other orthographic means (Cheng, 2002; Lee, 2002; Lee, 2007). These features further have influenced the diverse CMC contexts for Chinese users. In order to address these CMC contexts and the involved online interactions, a few research inquiries have been conducted on digital communication in mainland China and its diaspora (e.g., Chen, 2014; Cheng, 2002; Lee, 2007; Varis & Wang, 2011; Yang, 2007). These studies include investigations of how both linguistic and semiotic resources of Cantonese and Mandarin speakers are deployed in various online mediums such as Internet Relay Chat (IRC), emails, discussion forums and social networking sites. Some of the earliest research on Chinese online discourse practices were conducted in the context of Hong Kong (Cheng, 2002; Lee, 2002; Lee, 2007).

Online Communication in Hong Kong

As one of the most important portal cities for the entrance to mainland China, Hong Kong is a matrix of various languages including Cantonese, modern standard Chinese Putonghua (Mandarin), and English. Among those languages, Cantonese as a Yue dialect of Chinese has long been used in Hong Kong with over 90% of its population (Lee, 2007). Since 1970s, written Chinese, spoken Cantonese and English have become the official languages (Bolton, 2002). However, though English has an important role in Hong Kong due to the British colonization from 1841 to 1997, it is less used interpersonally and with family compared with Cantonese. Rather English is most often used in public domains such as government, education and business (Lee, 2007; Luke & Richards, 1982). As a result, the complex linguistic landscape of Hong Kong, which includes the use of Chinese Mandarin, Cantonese and English, has foregrounded the diverse language features and discourse practices in the CMC context.

Hong Kong is also believed to be the first region in Asia associated with the spread of the instant messaging chatting system – "I Seek You" (ICQ). In this application, Cheng (2002) and Lee (2007) found that code-mixing of Mandarin Chinese characters, Cantonese stylized characters - officially codified as "Hong Kong Supplementary Character Set" (GovHK, 2015, March), English, English transliterations and Romanized Cantonese expressions are widely accepted and used by people in Hong Kong in emails and ICQ messages (Cheng, 2002; Lee, 2007). Uses of multimodal features such as Asian emoticons as well as Cantonese Romanizations are also adopted in ICQ messages as synchronous communication encourages more efficient typing strategies such as shortenings and Romanized letters. However, these newer types of literacy practices are not simply created randomly or in a chaotic manner. As Androutsopoulos (2011) has pointed out, online utterances are not invented, but rely on prior texts and are "fabricated through social actors who weave voices of society into their discourses"

(p. 282). The spoken and written literacy practices found in these ICQ messages, though often uncodified officially, present certain degrees of regularities (i.e., "conventional" forms), thus ensuring comprehension in online communication.

In one of the earliest studies, Cheng (2002) documented and analyzed the code-mixings of Chinese characters, Cantonese styled characters and English in conversations found in the online chatting platform, ICQ, by users of digital communication in Hong Kong. She found that the strategies of code-mixing in ICQ messages indeed present regularity, despite the fact that many of the uses, especially for Cantonese styled Chinese, had not previously been codified at the time. The code-mixing strategies, as characterized by the researcher, demonstrate both simplicity and creativity, and often reflected the trendiness of meaning making from prevalent cyberculture used by the younger generation. For instance, uses of emoticons are frequently observed in Hong Kongers' ICQ interactions, and uses of Cantonese in ICQ interactions project a specific identity and community of Internet users. In addition, when a form is created and spread swiftly from groups to groups, it becomes conventionalized. Moreover, the researcher specifically points out the influence of globalization in the process of further mixing the language knowledge and language use of ICQ users. Instances of language borrowing, such as using "巴士" – Bāshì transliterated from "bus" in English, is frequently adopted by Hong Kong ICQ users. This study further revealed the blurred boundary between spoken and written language online. For example, in ICQ interactions features of the spoken language has been frequently invoked as written literacy practices in online chatting, creating a hybrid form of literacy practices. The researcher argues that online literacy practices are neither spoken nor written as they are both "interactive and written" (Cheng, 2002, p. 97).

Building on Cheng (2002)'s study, Lee (2007) further classified the meaning making strategies of online communication in Hong Kong. She included both email and ICQ in her research and identified additional types of code-mixing strategies which include not only Chinese and Cantonese styled characters and English, but also Romanized Cantonese, transliterations of English, stylized Arabic numerals (e.g., using "99" that resembles "night night" in English for "good night"), and uses of emoticons. Interestingly, although users were familiar with the character input system, they seemed to prefer other scripts. Of the 167 emails and 155 ICQ chat sessions examined, only 10% (17) of emails and 46% (72) of ICQ chat sessions contained Chinese characters. Additionally, similar to Cheng's (2002) findings, simplicity was considered to be one of the key factors accounting for these features of online communication. The researcher further compared interactions in emails and ICQ sessions, and reveals that code-mixing was more common in ICQ messages. She argues that this difference is mainly due to the different levels of synchronicity and formality in two CMC platforms. In this study, emails were composed mostly for more formal contexts, while ICQ messages were conducted for more casual interactions which contain significantly more creative and playful literacy practices.

Online Communication in Mainland China

With the growth of economy and international influence, mainland China has become the focus of several studies on the digital discourse practices (e.g., Chen, 2014; Dong et al., 2012; Li & Yarowsky, 2008; Lotherington & Xu, Yang, 2007; Varis & Wang, 2011; Yuan, 2011). Most of these studies investigated digital communication in popular CMC contexts in mainland China, which include instant messaging, discussion forums, social networking websites and microblogging sites. However, the Chinese government has announced its stringent control over the

linguistic purity of Chinese, as it bans the "random mixing of words or acronyms from English or other foreign languages in Chinese publications in mainland China" as this is considered "abusive use" of language and challenges "the harmonious and healthy linguistic and cultural environment" (General Administration of Press and Publication, 2010, December 20). Nevertheless, Chinese online users still adopt various meaning making strategies, including code-mixing, in their online literacy practices. These strategies not only assist the efficiency of the Chinese input system of Pinyin in terms of shorthand typing, but also demonstrate the diverse linguistic resources adopted by Chinese users.

In one of the earliest research inquiries in the digital practices that involve the context of mainland China, Lotherington and Xu (2004) conducted a contrastive analysis of the online written texts of English and Chinese by native online users of Chinese, English, and Chinese-English bilinguals, which were compared in terms of orthographic, syntactic, discourse and sociocultural conventions. More specifically, the research includes a small group of high school students in Toronto (age 13-14) who use MSN instant messaging, two female undergraduate students (early 20s) from a Canadian university who use AIM instant messaging, and a group of young professionals in China and North America who use OICQ instant chatting system. Altogether, the online chat data were collected along with 54 questionnaire responses equally divided in Chinese and English responses (i.e., 27 responses for each language). Similar to the findings of CMC research conducted in the context of Hong Kong by Cheng (2002) and Lee (2007), the researchers found numerous applications of shorthand strategies with certain levels of regularities. The study also reveals that various orthographic features were creatively adopted in digital communication, including uses of acronyms, emoticons, abbreviations from sources in English and Chinese, innovative capitalizations, and various homophonetic strategies that

include homophones based on characters, numerals, onomatopoeia and stylistic spellings. Codemixings are also extensively adopted which include uses of Chinese, English and Japanese. What is more, the target users were able to extend creative meaning making on levels of syntax, discourse and sociocultural conventions. These users were able to adopt syntactic conventions (e.g., using "ttyl" for the entire sentence), discourse conventions (e.g., incorporate English shorthand strategies such as "C U" for "see you"), and sociocultural conventions (e.g., naming conventions such as using fake compounds; for example, "Youjumpijump" – a line of script adopted from the movie "Titanic"). The researchers conclude that although the Chinese logographic input system might be less efficient for keyboard input, it seems to provide more opportunities for creative online literacy practices. These creative conventions provide not only flexibility in meaning making, but also offer regularity that allows online users to interact smoothly.

Another contrastive analysis was conducted by Yang (2007) which focused on two contexts of language practices that share Chinese as the native language (i.e., Taiwan and mainland China). This study further complicates the discussion of Chinese online writing systems in terms of variations within the language itself. The researcher found many differences in the writing systems between Taiwan and mainland China, and argues that it is due to the different linguistic environments and the availability of semiotic resources (e.g., English proficiency) of the two language contexts. Therefore, research on Chinese online discourse practices should consider the larger sociolinguistic context of the speech community being studied. In other words, the description and analysis of macro contexts has to be included when studying complex environments of digital communication.

Zhang (2012) continues to investigate the discourse practices, such as code-mixing, of Chinese online users or "netizens". She specifically focused on the Chinese-English code-mixing practices on the homegrown social networks. These sites include Douban (a social networking site), Weibo (a micro-blogging site), and Youku (a video sharing website). Despite the stringent governmental control over Chinese linguistic purity (GAPP, 2010, December 20), Chinese netizens were found to practice various types of Chinese-English code-mixing on these CMC mediums by creatively playing through two languages. For instance, Chinese netizens used Chinese as the base and inserted English words as nouns or adjectives, or simply used literal translation for Chinese expressions (e.g., "海归" is translated literally as "Sea (海) back (归)", which means "returnees"). Moreover, these code-mixing practices reflect the pidginization of Chinese English through which Chinese clause structures are also influenced by English (e.g., change "给我用用" into English in the same clause structure as "give (给) me (我) use (用) use (用)"). Besides Chinese netizens, the researcher reveals that the government also adopts codemixing in online messages. In the example, she shows how a Chinese police department organizes the message for "wanted notice" into a genre of flash online sales slogan as "百团乐 go" (literal English translation as "Hundred groups happy go") in the Chinese micro-blogging site, Weibo. In this message, "go" shares the same phonological feature of "购" (Gou) in Chinese which means "buy." The researcher further analyzed the pop culture of Chinese-English codemixing by introducing the famous Youku (a video-sharing site similar to YouTube) video "Introducing nine countries in nine Englishes by Northeast English Brother", uploaded by "Nick 张旭" (screen name). In this video, the uploader utilizes various phonological, lexical, nonverbal meaning making cues (e.g., gestures) and background music to introduce eight varieties of English from Japan, South Korea, Britain, India, France, Italy, the United States, Russia and

China. While using English in his video, "Nick 张旭" uses Chinese subtitles mixed with English of lexicon and syntax. His work was found to be extremely popular and well received by Chinese netizens. Some English educators even use his video for classroom English instruction. This conflict between the authoritative Internet censorship and the subversive online literacy practices of Chinese netizens reflect the Bakhtinian notion of the tension between centripetal and centrifugal forces (Bakhtin, 1981). In other words, whenever there is a unifying and official discourse, there is another force that pushes the discourse away from the center.

More recent research on digital communication of Chinese users has also addressed the playfulness of online discourse practices (e.g., Chen, 2014; Wang et al., 2016; Yuan, 2011). Besides the descriptive analysis of online discourse practices, these studies focus on the discourse practices in Chinese in terms how these practices are adopted by online users to reflect the sociocultural/sociopolitical ideologies and power relationships in themes of language (de)normalization, online censorship and the avoidance of it. Yuan (2011) specifically addresses the capability of Chinese online users in terms of avoiding strict Internet censorship of the Chinese government by investigating two bulletin board systems (BBS). The first BBS site is from jjwxc.net on which amateur romance writers post their work; the other one is "Guoji Guancha" (Comments on International Affairs) on which people comment on China's international events. Going beyond linguistic description of online text, the study explores the discourse practices in relation to the societal context. The researcher found that BBS users adopt various discourse strategies to identify each other in target online communities. For instance, users of the romance forum often resort to code-mixing strategies that are only intelligible to the community for discussions of sensitive topics such as gay rights. On the other hand, Chinese online users are nevertheless able to critically and creatively participate in discussions that defy

the censorship through the use of diverse semiotic resources. For example, "MZ" was adopted by BBS forum users for "民主" (Mínzhǔ) which means "democracy" to avoid official online censorship.

Additionally, in his study on the discourse practices of two popular Chinese social networking sites (i.e., Qzone and Renren, two websites that are similar to the Facebook), Chen (2014) reveals that Chinese online users from mainland China use Pinyin acronyms to avoid online censorship. What is more, extensive uses of taboo language practices (e.g., insults and sexually offensive terms) were identified to be presented in the form of acronyms. The researcher suggests that by avoiding the full writing of taboo terms, using acronyms in fact appear to soften the impoliteness of the original form of taboo expressions. This finding is compatible with Bakhtin's concept of "carnivalesque" and "grotesque" language practices (Bakhtin, 1984) that suggest language practices are often playful and even offensive, which are usually taken lightly by others.

Varis and Wang (2011) further investigate the uses of creative and playful semiotic resources in China, with a focus on superdiversity. Through the analysis of the online activities of a rapper in Beijing, they found that the rapper uses global features such as "hip-hop-like" lyrics (e.g., "dirty words"), self-portrait online with hip-hop stylizations (e.g., baseball cap), and uses of English or Romanized letters, which are mixed with the local features that are "Chinese" (e.g., Chinese lyrics). On the other hand, they argue that the construction of "authenticity" is more prevalent in the localized hip-hop practices than demonstrating the rapper's localization through utilization of local semiotic resources. In other words, exploitation of superdiverse semiotic sources can be a process of attending to various normativities (i.e., the global hip-hop culture in this case) that ultimately project authenticity.

As the previous research has shown, Chinese users adopt diverse meaning making strategies and varied semiotic resources in their online interactions. However, there are still gaps to fill in the digital discourse practices of Chinese online users in terms of the description, analysis and theorizing in the uses of semiotic resources. Meaning making strategies such as accented Chinese (i.e., dialectal Chinese expressions/pronunciations), Chinese radicals (i.e., the graphic components of Chinese characters), and use of Arabic numerals (e.g., Zhang, 2017) are still under-researched in Chinese users' online interactions. To fully capture the characteristics of Chinese online communication, the researcher will adopt the concept of heteroglossia in the analysis of Chinese users' online communication. The current study continues to explore the uses of semiotic resources by online users of mainland China and its diaspora with a specific focus on CMC platforms originally from mainland China (i.e., Weibo and bilibili.com). It is in line with current trends in computer-mediated discourse analytic research. First, computer-mediated discourse research includes all kinds of interpersonal online communication such as emails, instant messaging, social networking sites and so on (Barton & Lee, 2013). The digital medium of the current research as Web 2.0, i.e. Weibo (micro-blogging) and bilibili.com (a video sharing website), fits the scope of computer-mediated discourse research. Second, the current study contributes to the call for more focus on multimodality. Androutsopoulos (2011) suggests that a traditional language variation approach is usually incapable of fully describing the Web 2.0 literacy practices as they often appear in fragmented forms through multimodal contexts. Many literacy practices cannot be easily construed as written or spoken languages as they appear in semiotic means as videos, images and so on along with languages. The current study attempts to describe and analyze the multimodal features of two selected CMC sites and discuss how multimodality facilitates Chinese online users' literacy practices.

Summary of the Chapter

Adopting the concept of heteroglossia for online communication research avoids some of the shortcomings of traditional language approaches, such as code-switching and bilingualism, which tend to treat language(s) as ideologically static and monolithically constructed systems and are less effective in analyzing multimodal communication. Heteroglossia focuses on the actual language-in-use situated in the contextualized social actions. Moreover, a heteroglossic perspective encompasses both monolingual and multilingual communication (Bailey, 2007) and avoids the controversial concept of "native speakers." For instance, in some of the complex sociolinguistic contexts such as mainland China, a country with multi-dialectical spoken languages and regional variations of written literacy, the construct of bilingualism and multilingualism become less effective when coping with the fluid and polycentric sociolinguistic reality. On the other hand, heteroglossia is not confined with the limitations of the variationist view on sociolinguistic research. A heteroglossic research approach is capable of encompassing language practices comprising of different linguistic systems, semiotic resources, and digital multimodality.

Furthermore, a heteroglossic approach has promising potentials in the study of digital communication, which is noted for the hybridity and complexity of linguistic and semiotic resources, authorship and multimodality. These features are fully compatible with Bakhtinian view on language practices, which is fundamentally dialogic (Bakhtin, 1981). As discussed in the previous review of literature, the discourse practices constructed on various digital contexts are voiced and individualized by CMC users. Each utterance has the potential to be picked up by another in different ways in terms of style, register and genre. In other words, each produced

utterance will enter into a complex and multi-layered discourse environment, and is subject to responses of potential future audiences, whether by design or not. This layer of communication is further complicated with the multimodality of digital communication, purposefully utilized by online users in their discourse practices. The technological affordances also allow users to select from an array of various linguistic and semiotic resources available to each individual, and often bear heteroglossic features projected toward identities, converge/diverge of communities, and other communicative functions.

Additionally, heteroglossic communication encourages playful and innovative discourse practices. The translocality of information enabled by the Internet removes geographical limitations for online users. Different linguistic features (e.g., dialects and transliterations), cultural artifacts (e.g., music and games), and other meaning making signs (e.g., emoticons and emojis) are woven into individuals' discourse practices. Therefore, online spaces are further expanded for heterogeneity, and voices of various intertextual origins are creatively and often artistically (Deumert, 2014) constructed. The playful uses of language, or in Bakhtin's (1984) terms "carnivalesque" and sometimes "grotesque," can be observed on various discourse levels. Utterances that involve mocking, sexuality, insults, or even profanities are often taken as non-offensive, and the Internet provides a rebellious playground for people to challenge the dominant or authoritative discourse and ideologies through humorous and innovative utterances.

Theorized in the concept of heteroglossia, the proposed study researches the application of various semiotic resources that address the diverse digital communication in mainland China and its diaspora. I focus on uses of language(s) and various other semiotic resources adopted by Chinese online users facilitated by the spread of the Internet and CMC platforms. At the same time, this study emphasizes the roles of multimodality of digital communication, which includes

the documentation and analyses of various technological affordances that aid online interactions, such as emoticons, emojis, and pictures which are often purposefully fabricated into online discourse. The following chapter provides a detailed description of the study's research methodology.

CHAPTER III. METHODOLOGY

The current research investigates the use of semiotic resources by online users of social media from mainland China and its diaspora. In this chapter, I begin by introducing the linguistic reality of China, as well as the research context of the proposed study, which are the two Chinese CMC sites – Weibo and bilibili.com. Then, I provide a detailed description of a one-week pilot study on the two CMC sites. Based on the results of the pilot study, I designed the research methodology for the current study, including data collection, data sampling, and data analysis.

Linguistic Reality of Mainland China and its Diaspora

The linguistic reality in China, which is remarkably different from many western contexts, poses great challenges as well as potential for sociolinguistic research. Although the official spoken language of PRC is Putonghua (i.e., Chinese Mandarin), China is home to many different spoken dialects that differ in pronunciation, syntax, idiomatic expressions and lexicon. Many of these dialects are not mutually intelligible. These Chinese language varieties, such as Cantonese, have been referred to as "方言" (dialects) by Chinese people (Chen, 1999). Further complicating the dialectal landscape in China is the fact that there are also some regional varieties of the same dialect, which are not mutually intelligible (e.g., people from different part of Guangdong province might not understand each other when they use different variations of Cantonese).

While the spoken languages and dialects in China are indeed complex and different from many other language contexts, the modern written form of Chinese has been relatively stable since the foundation of People's Republic of China in 1949. Now, educated citizens in China are able to comprehend and communicate through spoken (Chinese Mandarin) and written Chinese (Simplified Chinese characters). In addition to the various Chinese languages/dialects, English is widely taught as a required foreign language throughout the education system. During the last decades, students in mainland China are required to start learning English from the 9th grade (Ministry of Education, 2001) with variations in some areas due to the provincial policy and the available linguistic/educational resources. However, neither English nor other foreign languages are used as a lingua franca in mainland China. The situation is different in Hong Kong/Macao where English/Portuguese is used as an auxiliary language due to the colonial history. Specifically, in Hong Kong, English is generally adopted in public domains such as government, business, and mass media. It is not often used in family conversations, though it was served as a source for code-switching with Cantonese and Mandarin (Lee, 2007). Therefore, the complex linguistic macro context discussed above suggests that the linguistic repertoire of any individual from China can be complicated and unpredictable depending on their linguistic history. In the next section, I introduce the research context of the proposed study. Specifically, the following section offers detailed descriptions of the target Chinese CMC platforms, Weibo and bilibili.com.

Research Context

The study focuses on the online literacy practices of Chinese users in two CMC sites, the micro-blogging site Weibo and video-sharing site bilibili.com. Both sites enjoy considerable popularity in mainland China and among Chinese diaspora. The following sections provide

detailed descriptions of the two CMC platforms in terms of their history, technological affordances, and supported online content and interactions.

The Micro-blogging Site - Weibo

Weibo (微博 Wēi bó) is the most popular micro-blogging site for Chinese online users. As an individual service, Weibo was first introduced in 2009 by the popular Chinese website portal, Sina.com. It offers a communication platform of micro-blogging for Chinese online users to exchange and share information. It is reported that in 2011 alone, Sina Weibo accounted for 57% of the entire registered micro-blogging users and 87% of active micro-blogging activities in mainland China (Sina, 2011, Jun). Moreover, according to the latest official Weibo Data, Weibo users were relatively evenly distributed in terms of age groups, among which 19-35 year-old users occupied 72% of the total numbers of active users per month (Weibo Data Center, 2014). Of this the largest age group is between 26-35 (27%), closely followed by age group 19-22 (25%) and 23-25 (20%). There are also more male users are also more active (60.9%) than female users (39.1%). Currently Weibo has extended its service to large Chinese speaking communities and population that include Taiwan, Hong Kong, Malaysia, Thailand, North America, and an international site for other areas. All of the branch sites have their own domain names (e.g., us.weibo.com for users in North America), and Sina has also developed mobile applications of Weibo for cellphones and tablets. In addition, Weibo shares many similarities with Twitter where users can post, read and respond messages with word/character limitations (140 characters/letters/emojis). Registered Weibo users can use functions such as "@" to address other users and hashtags ("#") to follow various topics. Weibo also has some features of social networking sites such as Facebook as it provides various tools to customize user pages and connect users with similar interests.

Moreover, Weibo supports multiple language input systems in simplified Chinese characters, traditional Chinese characters (i.e., the characters used mainly in Taiwan and Hong Kong) and English. Weibo users can also upload and/or share multimodal contents such as pictures and videos, and comment on other people's posts and comments as well. For pictures, users can upload single pictures, multiple pictures, or design multiple pictures as fractions into one picture. Additionally, the input system of Weibo offers an array of emojis for its users. These emojis, different from those from many other CMC sites, are dynamic. In other words, these emojis are in fact "gif" (Graphics Interchange Format) animations. For instance, a typical emoji

from Weibo can start as "V", and then change to "V", and finish with a shiny "bling" effect. A typical Weibo page is presented below in Figure 2.



Figure 2. A typical Weibo post

Each Weibo user can select their own choice of profile image or photo (the top left blocked area) and user ID (the blocked area to the right of the profile picture). However, if a Weibo user is a public figure or celebrity, he/she is required to register with a real name and use their real photos as profile pictures if they wish to be endorsed as the person they claim to be. In other words, if a public figure would like to be authenticated by Weibo, they need to provide extensive information about themselves. At the bottom, four functions are available for Weibo users. They are, from left to right, "favorite" (the Weibo will be saved), "forward" (the Weibo can be forwarded as the user's post), "comment" (the user can post comments), and "like" (a similar function to the "Like" button on Facebook). Besides functions of micro-blogging, Weibo allows users to "fan" each other, which functions similarly to the "follow" function of Twitter and Facebook. In this way, Weibo users are connected to the people and topics that they are interested in and receive updates from them daily.

The Video-sharing Site - bilibili.com

The other target CMC site, bilibili.com, is a video sharing website which is themed with ACG (i.e., Animation, Comics, and Games) videos. Currently, the website has also expanded its themes to eleven video categories. These categories include Current Animation Series (番剧) in which the videos are the most up-to-date cartoon series, Animations (动画) which mainly includes fan-made videos (e.g., mashup videos which are created by mixing various videos under one theme, often with video uploaders' own choice of music), Music (音乐) which includes both copyright protected and self-made music (e.g., remixed songs), Dance (舞蹈) which includes videos about dancing, Games (游戏) which includes videos on gaming (e.g., game reviews), Technology/Science (科技) which includes videos about inventions and technologies (e.g., documentary videos), Amusement (娱乐) which includes videos for humorous effects (e.g., standup comedies), Self-made Videos with repetitive rhythms (鬼畜 - a type of self-made videos transliterated from Japanese that features high speed repetition of same songs and rhythms for humorous effect), Movies (电影) which includes both Chinese and other foreign movies, Television Series (电视剧) which includes both Chinese and other foreign TV series, and Fashion (时尚) which includes videos about beauty and fashion (e.g., videos about make-up tips). The videos on the website are mainly from third party sources (i.e., other video sharing websites)

except for all its Japanese animation series, which are officially purchased and protected with copyright.

Besides the multi-themed content, the site's name is comprised of various semiotic resources, some of which are typically found in online CMC contexts. The complete version of the website name is displayed as "哔哩哔哩弹幕视频网-(°-°)つロ乾杯~-bilibili" which is not only multilingual with Chinese characters and Japanese Kanji, but also incorporates a Japanese emoticon. See Table 1 for the full illustration of the website name.

Table 1. Multilingual and multimodal composition of bilibili.com website name

Simplified Chinese	Japanese emoticon	Japanese Kanji
哔哩哔哩弹幕视频网	(°- °)つロ	乾杯

The first part, "哔哩哔哩" (Bì lī bì lī), is a homophone of "bilibili" that serves as the site's domain name and it is believed that the naming represents a female Japanese animation character (the name resembles the sound of electric current). It is then followed by "弹幕" (Dàn mù) which literally means "bullet curtain." This notion was originally from Japanese known as "Danmaku," a video shooting game in which the screen is often filled with bullets from gamers' enemies. It allows users to post real-time comments that are directly displayed as subtitles laid over on the on-going video, resembling the "Danmaku" games. In fact, this is perhaps the most unique characteristic of bilibili.com, which resembles a similar video sharing website from Japan called Nico Nico Douga. Following the "bullet curtain" – "弹幕" is "视频网" which simply means "video website." It is followed with a Japanese emotion "(°- °) つ □," resembling a person holding a cup. The cup is demonstrated as "□." A Japanese Kanji phrase is then written

after the emoticon as "乾杯" which literally means "proposing a toast." Figure 3 below shows a typical video with "bullet curtain" comments moving from the right to the left of the screen.



Figure 3. A video with "弹幕" (bullet curtain) comments

Since its establishment in 2010, bilibili.com currently ranks 46 of all websites in terms of popularity in China (Alexa, 2015, October) with most viewers from mainland China (79%) and the United States (10.1%). Although there is no official report on the user basis of bilibili.com, it is reasonable to speculate that most of its users are the younger generations (i.e., under 30) who are interested in ACG culture. Users do not need to register to view the videos or post "bullet curtain" comments, but their "bullet curtain" comments are limited in length (no more than 20 characters) and choices of styles (e.g., colors and fonts). For instance, non-registered users can type up to 20 characters. If viewers decide that the "bullet curtain" comments are too many and thus blocking the ongoing video, they can choose to fade some proportions of the comments (from 0% to 100%) or simply block the comments entirely. Users who are registered can also comment in the comment section under the video information, which is similar to discussion boards, but have more options with respect to styles.

The Pilot Study

In order to provide a more detailed and feasible research procedural plan for the research, a one-week pilot study was conducted from December 7 to 13, 2015. Data were collected from both Weibo and bilibili.com. To maximize the representativeness and randomization for qualitative data collection, I only chose the top public threads from Weibo and the most popular videos from bilibili.com. Through the pilot study, I intend to draw some preliminary findings regarding the research questions proposed previously, which are 1) What heteroglossic semiotic resources, such as foreign language features and Chinese regional dialects, are adopted by Chinese online users in their online literacy practices? 2) What communicative functions, such as demonstration of admiration and euphemisms, are demonstrated by Chinese online users' adopted or semiotic resources? 3) What differences in the literacy practices, such as adopted resources and communicative functions, can be observed between Weibo and bilibili.com? In the following sections, I describe the steps taken for data collection for Weibo and bilibili.com and present the results of this pilot study.

Pilot Data Collection for Weibo

For Weibo, data were collected from the popular "Hot Weibo" ("热门微博" Rèmén Wēi bó – Hot micro-blogging) section. The Weibo posts from this section are comprised of selected popular posts each day. Like many other micro-blogging sites such as Twitter, Weibo interactions generally consist of two interactional types. The first type is the micro-blogging posts, and the second type is the comments for each post. Among these two types of Weibo interactions, I examined the first five posts from the "Hot Weibo" section and the first five comments for each of the five posts on a daily basis (see Figure 4 and 5 below for the

screenshots of a typical "Hot Weibo" page and the top five comments that follow an entry of a "Hot Weibo" post).

大家正在搜:	Weibo	ber 🛛 🕸	1 微博
し d.webo.com	微博精彩从这里开始!		
出门微博	热门微调榜 分类	热门微博分类	
微话题 找人	点此直看:热门做吻管理规范(试行版) >	 • 视频 • 圆际 	 ● 社会 Ø 科技
影 喩	24小时 (共300条) 1小时 周龄 月晚	82 科普 11 财经	D1 数码 ビ 股市
股票	た日 列順out	☆ 明星 ⑫ 电视剧 □ 音乐	88 综艺 ロ) 电影 同:汽车
		◎ 体育□ 健康	▶ 运动健身 圖 瘦身
做游 時物	2015年1月22日 20:34 来自 Phone 6s	⇔ 养生 ♥ 历史	
6 10	收逾 转发 3347 评论 13580 6 279158	◎ 美图	 ○ 情感 ◎ 笑活

Figure 4. A screenshot for "Hot Weibo" page

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1622	2E 20:34 来自 iPhone 6s		
收藏	结发 3347	评论 13580	<u>1</u> 為 279158
© (🛛 🗌 同时转发到我的微博		Ŧite
全部	热门 认证用户 关注的人		共13580务
	1月22日 20:35	这绝对是邓超拿了娘娘手机发	的 回复 凸 1203
	1月22日 20:34		回复 凸 33
	你有等等 <mark>。</mark> 1月22日 20:34		回复 人 28
	1月22日 20:35	躍地超帝 ! 🙂	回复 🛛 🛆 34
	快把手机还给	A LAND BOOM	

Figure 5. A screenshot for the top "Hot Weibo" post and following comments

Pilot Data Collection for bilibili.com

For bilibili.com, data were collected from the top viewed videos. The website offers six most popular videos which appear on the homepage. (see the highlighted section in Figure 6).



Figure 6. The six featured videos on the homepage of bilibili.com

These six videos are selected by bilibili.com with video uploaders who have the highest bilibili.com user points, which is determined by each user's active log-on time, the number of uploaded videos, the number of each user's videos that are "favorited" by other users, and the users' amount of bilibili.com coins (a currency of the website which can be used to advertise registered users' videos). Therefore, the featured six videos on the homepage represent the most popular genres and themes of the website, and they always receive a great amount of "bullet curtain" comments. During the piloting phase, data collection of bilibili.com was focused on these six featured videos. However, since these featured videos were not refreshed daily as "Hot Weibo" posts, data were collected twice in the one-week pilot study (on Monday and Thursday) to allow ample time for new popular videos to be updated.

The data collection on bilibili.com involves two types of interactions. The website provides two modes of comments, the "bullet curtain" comments (i.e., "弹幕") that are laid over the ongoing videos like a curtain which can be posted by any video viewer, and the conventional commentary which can only be posted by registered users below the information texts of each video. For the "bullet curtain" comments, data were collected directly from the "Comment Log" on the right side of each video in which every "bullet curtain" comment can be found as texts (see the highlighted section in Figure 7).

< .	【Bilibili Moe 2015 动画角色人气大费】正式开始! 未为心爱的角色投票吧!		▶ 播放: 73112 ♥ 收減: 2810	d {论 ■{论 ◎ 砚市: 2604	当前視众 2 108 位
	没绿红茶更新啦来了 前前-万 前	前一千。	₱ # # # # # # # # # # # # # # # # # # #		 ① 历史外募
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	UP无限为优视作去来级啊? 第一	- 1	00:17 jjj		12-20 03:49
	不夠完~ 第一!!!	毛汁古	00:06 第一位		12-20 03:49
ţ.		看过直	- i (k) 80:00		12-20 03:49
	宋 和总算出了!!!	第 几?	00:04 _{ouo}		12-20 03:50
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	辦客无法发送弹幕,请登录或注册会员 ⑦ 无法输入中文	? 发送 >			10.00.00.00

Figure 7. "Bullet curtain" comment log on the right for each bilibili.com video

In addition, screenshots were taken to show how "bullet curtain" comments appeared in the actual video. For conventional comments in the commentary section below the video, the first five comments for each video were included for data collection (see Figure 8 for an example of the conventional text-box comments from bilibili.com).



Figure 8. The top five conventional text-box comments from bilibili.com

Moreover, a methodological decision was made to focus only on videos that were less than 10 minutes long. This was due to the methodological consideration as some video categories in

bilibili.com, such as "Movies" and "Television Series," are usually featured with videos that are 25-minute to 2-hour long. In these long videos, it takes overwhelming amount of time to record the "bullet curtain" comments. Therefore, long videos over 10 minutes were excluded from the pilot study.

The proposed data collection method for the pilot study was expected to provide both systematicity and representativeness of data collection. In order to provide a larger context for different types of online interactions on both sites, screenshots were taken and saved along with the textual data. The data collection method for the pilot study, which took place over one week, resulted in 35 Weibo posts and 175 Weibo comments, and 60 text-box video comments and over 1000 "bullet curtain" comments from 12 videos.

Pilot Data Sampling Strategy

The purpose of the pilot study was to document and describe the non-standard Chinese online literacy practice types observed from the data collected. To be more specific, I was interested in documenting any non-standard uses of written Chinese which were mentioned in the Purpose of the Study in Chapter 1, and potentially others. These include (a) non-standard literacy practices featuring Chinese languages/dialects that include stylized Chinese Mandarin, stylized dialect-accented Chinese, Romanized Chinese, and Chinese radicals, (b) non-standard literacy practices featuring languages other than Chinese that include uses of foreign language and transliterations, and (c) other semiotic resources beyond linguistic features that include emoticons, emojis, stylized Arabic numerals, and orthographic representations of paralinguistic features. Following this set of features, a total of 23 posts and 115 comment entries from Weibo were identified containing non-standard Chinese written literacy practices. For bilibili.com, a total of 38 text-box comment entries and 2385 "bullet curtain" comment entries were identified.

Each of these posts and comments contained more than one unconventional literacy practice. The total account of non-standard Chinese online literacy practices for both sites is 3084 in one week's worth of data collection.

For Weibo, 215 occurrences of non-standard Chinese literacy practices were identified (see Table 2). The most frequently adopted online literacy practices are uses of emojis and stylized Chinese Mandarin. It is worth pointing out that most of Weibo emoticons are "gif" animations. Each screenshot taken for data collection shows the stage when an emoticon finishes at the end of the animation. The second most common literacy practice type is stylized Chinese Mandarin with 49 occurrences.

Types of literacy practices	Count	Examples
Stylized Chinese Mandarin	49	"么么哒" - kiss
Stylized dialect-accented Chinese	3	"蒙逼" – shocked (Characters reflect pronunciation of northern Chinese dialects)
Romanized Chinese	9	"tmd" – 他妈的 (Tā mā de; meaning: fuck his mother)
Chinese radicals	0	
Non-standard Chinese character expressions	9	"小标砸" (Xiǎo biāo zá) – 小 婊子 (Xiǎo biǎo zi; meaning: little bitch)
Foreign language expressions	13	"!!!!!HELP!!!!!"
Foreign language transliterations	2	"粉丝" (Fěn sī) – fans
Kaomoji	1	- look sideways (showing contempt)

Table 2. Non-standard literacy practices on Weibo

Table 2 (C	ontinued)
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Types of literacy practices	Count	Examples
Emojis	127	8
Emoticons	0	
Stylized Arabic numerals	2	"484" – asking for confirmation
Orthographic representations of paralinguistic features	0	

For bilibili.com, two types of comments, the traditional text-box comments under each video and the "bullet curtain" comments that are laid over each ongoing video, were collected. Table 3 shows the result from the text-box comments. A total of 56 occurrences of non-standard Chinese literacy practices were identified. The most frequently adopted literacy practice type is the use of various kaomojis - alternative emoticons that are usually read vertically, composed of two-byte character/Kanji sets.

Types of literacy practices	Count	Examples
Stylized Chinese Mandarin	7	"路转粉" – turning from not knowing to be a fan of someone
Stylized dialect-accented Chinese	0	
Romanized Chinese	5	"tm" – "他妈" (Tā mā; meaning: his mother)
Chinese radicals	0	
Non-standard Chinese character expressions	1	"吊" (Diào) – 屌 (Diǎo; meaning: complimentary expression similar to "cool/awesome")
Foreign language expressions	11	"up 主" – uploader

Table 3. Non-standard literacy practices from text-box comments on bilibili.com

Types of literacy practices	Count	Examples
Foreign language transliterations	6	"酱" - ちゃん (Cha N; a Japanese honorific suffix for females)
	_	
Kaomojis	17	(= · ω · =)
Emojis	2	日♂常♂交♂战
Emoticons	3	:-)
Stylized Arabic numerals	4	"2333333" – laughter
Orthographic representations of paralinguistic features	1	"hhhh" – laughter ("哈哈哈哈" pronounced as "hahahaha" as the laughing sound in Chinese; "h" is used in this example)
Manually typed emojis	2	噫(笑)

Table 3 (Continued)

The "bullet curtain" comments provide the most examples of non-standard Chinese literacy practices. In total, 2815 instances of literacy practices featuring non-standard forms were identified in 9 videos featured on the homepage of bilibili.com (three videos were eliminated as they exceed 10 minutes). Among those examples, stylized Chinese Mandarin is the most common non-standard literacy practice type adopted by Chinese online users, followed by stylized Arabic numerals (586), non-standard Chinese character expressions (265), kaomojis (195), foreign language transliterations (195), and foreign language expressions (190). Table 4 shows the overview of data sampled from "bullet curtain" comments.

Table 4. Non-standard literacy practiced from "bullet curtain" comments on bilibili.com

Types of literacy practices	Count	Examples
Stylized Chinese Mandarin	1000	"什么鬼" – What the hell/ What is it?

Table 4 (Continued)

Types of literacy practices	Count	Examples	
Stylized dialect-accented Chinese	32	"猴猴听" – something is beautiful to hear or listen to (Characters reflect the pronunciation of Cantonese)	
Romanized Chinese	36	"woc" – 我肏 (Wǒ cào; meaning: I fuck. Used for strong emotions in Chinese)	
Chinese radicals	1	"我++我++" - 我草我草/我肏我肏 (Wǒ cào Wǒ cào; meaning: I fuck I fuck. Used for strong emotions in Chinese)	
Non-standard Chinese character expressions	265	"卧槽" (Wò cáo) – 我肏 (Wǒ cào; meaning: I fuck. Used for strong emotions in Chinese)	
Traditional Chinese characters	13	"好聽"	
Foreign language expressions	190	"へんたい" – pervert (Japanese)	
Foreign language transliterations	195	"赛高" – the best (transliterated from Japanese)	
Capitalized Chinese	2	"一个大写的懵逼" – a capitalized shock	
Kaomojis	275	_(:3 ィム)_	
Emojis	90	♥	
Emoticons	80	:)	
Stylized Arabic numerals	586	"6666666" – describing something/someone as awesome	
Orthographic representations of paralinguistic features	118	"ww" – crying sound ("呜呜" pronounced as "wū wū" as the crying sound in Chinese; "w" is used in this example)	
Manually typed emojis	7	"[doge]"	

In general, the data collection and sampling methodology for the pilot study is feasible for the proposed study. First, it offers a rich pool of data for both Weibo and bilibili.com in terms of blog posts/comments, conventional text-box comments, and the "bullet curtain" comments unique to bilibili.com. Second, various types of non-standard online literacy practices adopted by Chinese users were found, which ensured that sufficient data would be available for the present study.

Result and Methodological Implications of the Pilot Study

From the result of the pilot study, several "new" types of literacy practices (i.e., those no documented or discussed - at least to my knowledge - by previous researches) have appeared. These literacy practices include "non-standard Chinese character expressions", "traditional Chinese characters", "capitalized Chinese" and "manually typed emojis." For "non-standard Chinese character expressions", examples were found in all three commentary types from both CMC sites, especially in the "bullet curtain" comments from bilibili.com. For example, "我肏" (Wǒ cào) is frequently used in Weibo and bilibili.com which means literally in English as "I fuck." It is a commonly used vulgar expletive in Chinese languages. However, the standard characters for this expression were not found in the current study. Instead, this expression appears as "卧槽" (Wò cáo) which is the most commonly used non-standard Chinese character expression with 108 occurrences (105 occurrences from bilibili.com) and three additional character combinations with the same meaning, typed as "我曹" (Wǒ cáo, two occurrences), "我 章" (Wǒ cǎo, one occurrence), and "雾草" (Wù cǎo, one occurrence). These non-standard Chinese character expressions all share similar phonological features close to the standard

written form. In addition, there are also instances of using traditional Chinese characters¹, exclusively found on bilibili.com (13 instances).

Moreover, "kaomoji" (see Nishimura, 2007; Marksman & Oshima, 2007, October; Lee, 2017) were also included in the study. Kaomoji is a type of emoticons created by manga and anime fans in Japan. In Japanese, kaomoji is written as a combination of two Kanji words, "kao" (顏 – "face") and "moji" (文字 "character"). Different from Western emoticons, kaomoji does not require users to read emoticons sideways (e.g., Western emoticon ":-)"); instead, they are produced in vertical orientation (e.g., kaomoji "($^{\circ} \nabla^{\circ}$)"). Kaomojis also require different a written input system in CMC to accommodate the double-byte sets for characters in Japanese in contrast to the single-byte character sets in Roman alphabets. Due to the input system used in kaomojis for characters, it is not surprising for Chinese users to adopt these emoticons in online communication as the Chinese writing system also include characters. The pilot study, there are far more uses of kaomojis and emoticons in bilibili.com compared with Weibo. Even though bilibili.com provides functions for inputting emojis in "bullet curtain" comments, they are not much used with only 90 occurrences, compared to kaomoji (195 occurrences). This may be related to the association of Japanese-ness in bilibili.com.

Another additional literacy practice is "capitalized Chinese" and two instances of this type were found. Online users type "大写的", which literally means "capitalized" in English, before an adjective. As a logographic language in writing, Chinese orthography does not have capitalization which is found in Romanized languages. Nevertheless, this strategy is adopted by some Chinese users to show emphasis, or to draw attention to a word. Interestingly, the messages

¹ Traditional Chinese is the written script used in Cantonese speaking regions, such as Guangdong and Hong Kong. However, in most parts of mainland China, simplified Chinese is adopted for writing. In addition, many people in mainland China can read traditional Chinese as well.

from the two cases in the pilot study were actually not typed in a larger or bold font. It seems that the users believe typing out "capitalized" in Chinese is good enough for their purpose. Nevertheless, this is an interesting literacy practice that is adopted by Chinese online users who are familiar with the Roman alphabet.

Furthermore, some bilibili.com users creatively entered emojis by manually typing the names of popular emojis with uses of various types of parenthesis. For instance, bilibili.com users can type "doge" with parenthesis "()" to express the popular emoji "?". There are seven instances of this feature, all found from bilibili.com. This strategy is also found to be transferred in using emoticons. For example, a user directly typed "手动斜眼" in his/her "bullet curtain" comments. In this expression, "手动" literally means "manually type" and "斜眼" is the Chinese expression for "?" which demonstrates the meaning of "speechless."

Finally, Weibo and bilibili.com appear to provide different CMC affordances for Chinese online users, especially for their influences on users' choices of kaomojis/emoticons or emojis. From the pilot study, it is evident that Weibo users prefer emojis while bilibili.com users prefer kaomojis/emoticons. This phenomenon might be due to the fact that Weibo provides a great variety of animated emojis compared with bilibili.com which only provides basic and static emojis. The availability of emojis from Weibo is also much more abundant than those from bilibili.com, and new emojis are periodically updated in Weibo. In addition, the animation of emojis in Weibo makes the expressions more dynamic and expressive than traditional static ones. On the other hand, bilibili.com users prefer to use kaomojis/emoticons in both traditional textbox comments and "bullet curtain" comments. This might be the result from the influences of Japanese ACG culture, which is one of the main themes of bilibili.com. Moreover, uses of "@" are found in "bullet curtain" comments as well with a total of 15 occurrences (not included in the

sampling summary table). Different from micro-blogging sites such as Twitter and Weibo, typing "@" in bilibili.com does not notify the addressed user(s). However, from the result of the pilot study, bilibili.com users nevertheless use "@" in "bullet curtain" comments to address other users, who are usually famous video uploaders and have uploaded videos that are in some way similar or connected to the current video. In this case, "@" was adopted as a sign of "addressing" although the addressed user(s) will not be notified.

The pilot study has provided some insights in Chinese users' literacy practices on Weibo and bilibili.com. Moreover, the results have informed several new types of literacy practices that need to be included in the proposed study. In the following section, I provide the research design for the study.

Research Design for the Proposed Study

The proposed study is designed as an analysis of computer-mediated discourse practices (e.g., Androutsopoulos, 2010; Chen, 2014). Through this study, I attempt to answer the following research questions: (a) What heteroglossic semiotic resources are adopted by Chinese online users in their online literacy practices? (b) What communicative functions are demonstrated by Chinese online users' adoption of these semiotic resources? and (c) What differences in the literacy practices can be observed between Weibo and bilibili.com? By answering these research questions, I intend to investigate how various semiotic resources are adopted by Chinese online users, and how these featured literacy practices are deployed through contextualized online interactions. Considering the results of the pilot study, I conducted the data collection process in a two-month period which should yield a rich pool of data from both Weibo and bilibili.com.

online communication in terms of various literacy practices. These practices include both language practices and other meaning making strategies. The study attempts to provide a macro description of the features found in Chinese online literacy practices with detailed analyses of representative examples of these features. The following section presents the research design of this study.

Data Collection and Sampling Method

As Androutsopoulos (2013b) suggests, sampling online data is especially challenging due to the ubiquitous nature of the data, the multimodality of technological interfaces, and the complex layering of digital semiotic resources. In order to address those methodological challenges, the sampling method of this study was determined as a dual strategy of "sampling by phenomenon" and "sampling by time." By sampling according to the phenomenon, I focused on the non-standard Chinese literacy practices found on both Weibo and bilibili.com, including non-standard literacy practices featuring Chinese and other languages, and other semiotic resources such as emoticons and stylized Arabic numerals (see also Zhang, 2017). This sampling strategy provides the most direct and often in-depth analysis for literacy practices involving various languages and other meaning making resources (Herring, 2004). From the result of the pilot study, several types of non-standard literacy practices identified are presented in Table 5:

Literacy practices featuring Chinese	Stylized Chinese Mandarin Stylized dialect-accented Chinese Romanized Chinese Chinese radicals Non-standard Chinese character expressions Traditional Chinese characters
Literacy practices featuring languages other than Chinese	Foreign language expressions Foreign language transliterations Capitalized Chinese
Literacy practices using semiotic resources other than linguistic features	Kaomojis and emoticons Emojis Stylized Arabic numerals Orthographic representations of paralinguistic features Manually typed emojis

Table 5. Identified types of literacy practices by Chinese online users

In addition, I also sampled by time, which provides certain levels of regularity to the data collection (e.g., sampling at regular intervals). For the current study, data collection was completed in a two-month period from the micro-blogging site, Weibo, and video-sharing site, bilibili.com. Data from Weibo were collected on a daily basis and those from bilibili.com were collected twice per week. The different data collection intervals between the two target CMC sites are based on the findings in the pilot study, during which I discovered the different update rates of new content on the two sites. For Weibo, the most popular top posts are updated daily, while top viewed videos in bilibili.com might take more than one day to be updated by other videos. Therefore, in order to avoid using the same videos, the sampling frequency for bilibili.com was reduced to twice a week. The detailed sampling criteria are described in the following paragraph.

The data collection and sampling method follows the strategy adopted in the pilot study. For Weibo, data were collected on a daily basis from the "Hot Weibo" section. I focused on the top five "Hot Weibo" posts per day. For each of these posts, the top five comments from Weibo users were collected. It is worth mentioning that although sampling from the "Hot Weibo" posts provides regularity, it is still biased to some extent as these posts often come from celebrities. Nevertheless, they along with the comments that follow these posts still provide abundant data of the target literacy practices. For bilibili.com, data were collected twice a week on Mondays and Thursdays. The "bullet curtain" comments were collected from the six featured videos on the homepage of bilibili.com. Any videos over 10 minutes were excluded. For each video, the top five conventional text-box comments were also collected.

According to the data collection strategy mentioned above, 35 posts and 175 comments from Weibo, and "bullet curtain" comments from 12 videos and 60 text-box comments from bilibili.com were collected in a single week. The data were collected in a total length of two months. An overview of the data collection method is presented below in Table 6.

	Weibo	Bilibili.com
Frequency	Daily	Twice a week (M/TR)
N of posts/videos per day	5	6
N of comments per post/video	5	5
"Bullet curtain" comments	N/A	Variable
Total per week	35 posts; 175 comments	12 videos; 60 comments; "bullet curtain" comments over 2,000
Total for two months	310 posts; 1,550 comments	88 videos; 440 comments; 27,438 "bullet curtain" comments

Table 6. Overview of the data collection method

Accommodations for Multimodality and CMC Affordances

The complexity and multimodality of online interactions such as Weibo posts and "bullet curtain" comments from bilibili.com call for unique strategies for data sampling and data

management. First of all, interactions on both CMC sites are multimodal, which means that textual data might not reflect the full picture of Chinese users' interactions. Secondly, the interactions and contents on both CMC sites are time sensitive as they are frequently updated. Thirdly, issues of privacy and anonymity have always been an important element in CMC research. To deal with these challenges, several methodological decisions were made to enhance the general quality of the research design.

In order to demonstrate the complexity of multimodal data, screenshots were taken and saved along with documentation of textual data. As Androutsopoulos (2013b) points out, sampling by phenomenon might result in "loss of context and rule out a distributional analysis" (p. 239). In other words, collecting and sampling only the segmental pieces of textual data might not demonstrate the contextualized online interactions, especially when dealing with multimodal CMC interactions. To cope with this challenge, the current study tackles this challenge in the following manner. The data were collected in text-based forms, but screenshots were also taken so as to demonstrate how features other than standard Modern Chinese are adopted by Chinese online users in a contextualized chain of interactions. Specifically, for each new example that fits the data sampling criteria, a screenshot was taken. For example, when a "bullet curtain" comment, such as "666" (i.e., an Arabic number used to express the meaning of "something cool") was observed in a bilibili.com video, I took a screenshot of the current stage of the ongoing video that showed this comment entry. In this way, the full picture of a segment of online interaction can be displayed with its communicative context such as its related adjacent comments and the computer-mediated modalities such as choices of color and contents of ongoing videos. Using this method, each unit of data was grouped into an individual folder with the text-based data along with sample screenshots of "bullet curtain" comments interactions.

In addition to multimodality, the time-sensitive nature of the target CMC sites was also considered in data collection. Since both Weibo's and bilibili.com's featured videos are timesensitive, the top posts and videos are updated frequently; therefore, the sequence of posts, comments and videos are constantly shuffled and reshuffled. To ensure the systematicity of the data collection procedure (Androutsopoulos, 2013b), a fixed time for data collection for each site was selected, instead of randomly choosing a time window each day. To operationalize this process, I opened both the "Hot Weibo" page and the homepage of bilibili.com at 8:00 p.m., which was most convenient for me, on the days for data collection. While keeping these pages open, the top posts, comments, and videos remained unchanged unless they were refreshed manually. In this way, all collected data were guaranteed to be the top featured content at 8:00 p.m. Secondly, for some text-box comments in bilibili.com, a single comment may follow several threads of conversations (see Figure 9). In this case, all discussion threads were counted as one comment.



Figure 9. A text-box comment from bilibili.com followed by more comments

Moreover, caution has been taken to protect the privacy and anonymity of online users in this study. According to the latest ethical guidelines for Internet researches (Association of Internet Researchers, 2012), it is difficult to continue using the term "human subject" to determine or describe online activities. Instead, other issues such as public/private accessibility and personal identifications become more relevant in research of the internet. Both Weibo and bilibili.com are publicly accessible online spaces in which most users do not use their real names. The posts and comments from these sites are usually from unique individual users, except for some posts in Weibo that are composed by organizations or public media (e.g., a Weibo post by a famous television channel). An outsider of Weibo and bilibili.com can view comments posted on both sites even he/she is not registered or is connected to the comment poster. In this way, the data are completely publicly accessible and they do not require consent or permissions. In addition, it would also be impractical or even invasive if I reach out to actual users for consent. Nevertheless, both sites still contain restrictions for users that are not registered. In Weibo, one has to register for an account to post or comment on the site; in bilibili.com, although no registration is needed to post "bullet curtain" comments, only registered users can post in the conventional commentary section below the video information. In order to further compromise the identities of the online users of the target sites, none of the online user names were included in the data presentation and data analysis. For the screenshots of online interactions, user names and personal photos/pictures (e.g., selfies) were blocked out to avoid identification. In this way, the study protects the anonymity and privacy of the online users. Finally, this study is not focused on the CMC users, but rather describing a range of literacy practices that are shared in the two CMC sites. The data collected are not specific to unique individuals.

The data collection and sampling method has provided abundant data on Chinese online literacy practices. Adopting the data sampling strategies by phenomenon and time, the commonly adopted literacy practices by Chinese online users of Weibo and bilibili.com can be demonstrated, thus describing the diverse online meaning making context in mainland China and its diaspora.

Data Analysis

In the data analysis, I attempt to answer the proposed research questions by investigating the types of semiotic resources adopted by Chinese online users, the communicative functions of the featured literacy practices, and compare the differences found between the micro-blogging site - Weibo and video-sharing site - bilibili.com. The following section provides a detailed discussion on how these research questions were addressed.

In order to answer the first research question on the use of heteroglossic semiotic resources by online users, the data were analyzed as the use of the non-standard literacy practices identified as the use of language features from Chinese (e.g., stylized Chinese Mandarin), language features of foreign languages (e.g., transliterations), and other uses of semiotic resources (e.g., stylized Arabic numerals). With extensive online observation and data collection, each occurrence of the proposed discourse practices was counted under corresponding discourse classifications. In this way, the general distribution of each type of using semiotic resources was obtained.

Building on the analysis explained above, I analyzed the heteroglossic features of Chinese online interactions to address the second research question. In particular, I focused on how these semiotic resources, such as using Romanized expressions, can be adopted by Chinese online users who may not necessarily be proficient in other foreign languages. This research question is important as it can shed light on how linguistic and other semiotic resources are effectively adopted in the linguistically complex mainland China – a multi-dialectical nation with standardized spoken language (i.e., Chinese Mandarin) and writing system (i.e., Simplified Chinese). Although Chinese Mandarin is widely educated and practiced in mainland China, various foreign languages and dialects are still adopted in Chinese online discourse through

transliterations, code-mixings, paralinguistic structural changes and so on. From the pilot study, it is obvious that linguistic features are only part of the semiotic resources utilized by Chinese users. Other meaning making signs, such as emojis and kaomojis, also play significant roles in online literacy practices. In this way, I present the frequencies as well as effectiveness and creativity of these literacy practices in online communication which sharply opposes the linguistic purity movement of the government.

For the second research question, the communicative functions of the sampled data were analyzed by selecting the representative examples from each proposed categories. The discourse analysis was conducted in two steps. First, I described and analyzed the form and contextualized meaning of the sampled piece of data and the origin of the adopted strategies of semiotic features. Then, I continued to analyze the communicative function of the sampled data in terms of its discourse function. For instance, the Arabic number "8" has been widely adopted by Chinese users for non-ordinal/non-cardinal meanings. The numeral is typically used in the form of "88" or "886" which means "good-bye" in Chinese. This use is based on the pronunciation of Chinese Mandarin. "88" (Bābā)/ "886" (Bābāliù) is phonetically close to the pronunciation of "good-bye" in Chinese Mandarin as "拜拜" (Báibái)/ "拜拜喽" (Báibái lou); therefore, some Chinese online users adopt the Arabic numerals to achieve the communicative function of farewells. The phonetic features of the original Chinese characters are matched even with "喽" (lou), a character usually used as the ending (i.e., a pragmatic marker), as in "6" (liù) in the Chinese language. This semiotic feature is used frequently in Chinese discourse and has become conventionalized over the last 10 years (Crystal, 2008). It was probably adopted for efficiency in typing as it takes significantly more time to type "good-bye" through the Chinese Pinyin input system, in which one has to type the Romanized letter "baibai" and choose the correct character

combination for "good-bye." Therefore, the use of "88" or "886" functions as a closing "farewell" in terms of its discourse function. In this way, I adopted an inductive research approach through which sampled literacy practices were analyzed in terms of their discourse functions within the text,

Finally, for the last research question, I compared the differences of literacy practices between Weibo and bilibili.com. In other words, I investigated the different preferences of nonstandard literacy practice types between users of Weibo and bilibili.com and consider some of the factors related to these differences. Specifically, I compared the number of occurrences of each literacy practice type. After that, I analyzed the potential reasons for the different choices of literacy practices, and discussed how micro-blogging and video-sharing sites potentially facilitate different meaning making strategies. For instance, in the pilot study, I found more uses of emojis (127) in Weibo compared to bilibili.com (90). However, use of kaomojis were mostly found in bilibili.com (195), whereas no instances were found in Weibo. This is potentially due to two main reasons. First, Weibo provides far more choices of animated emojis than bilibili.com that only offers fundamental static emoji icons. Secondly, bilibili.com is heavily influenced by Japanese ACG culture, which may have resulted more uses of kaomojis – a meaning making strategy originally from Japan. This research question is important as the literacy practices on two CMC platforms can be compared and contrasted in order to reveal the role of CMC facilitation. Despite many shared features in terms of multimodal and commentary accommodations, Weibo as the micro-blogging site differs from the video-sharing site, bilibili.com. Firstly, they have different targeted user groups. While bilibili.com is heavily influenced by Japanese ACG culture and its fans are likely younger, Weibo has a more general and extensive user base. The two sites are also distinctive for their primary functions – Weibo is

more targeted for blogging and social networking, while bilibili.com provides space to share videos. Lastly, the two sites offer different multimodal options such as emotions and kaomojis. Comparing the literacy practices of the two sites provide a more complete picture of Chinese users' adoptions of linguistic and other semiotic resources in their online interactions. It is also possible to reveal the literacy practices that are relatively more mobile, and used most frequently on both sites.

This discourse analytic approach has previously been adopted by a few computermediated discourse analysis studies of Chinese digital communication (e.g., Chen, 2014; Cheng, 2002; Lee, 2007). For instance, in Lee's (2007) study of online communication in emails and ICQ in Hong Kong, the researcher analyzed the uses of different language features such as Romanized Cantonese, Cantonese homophones, combination of letters and standard Chinese characters, and so on. In each of these categories, excerpts were selected and presented with the original text in Chinese/Cantonese characters, Romanized Cantonese with tones, and morphemeby-morpheme translations. Through her layered presentation of each excerpt, the researcher was able to analyze the meanings and functions of these stylized online discourse practices. The current study adopts a similar method and analyzes the uses of various semiotic resources in the categories defined in the first section of this proposal. However, the current research builds on and extends Lee's (2007) study by encompassing more categories including standard Chinese, Chinese dialects in addition to Cantonese, foreign languages in addition to English, and other semiotic resources such as emoticons, emojis, kaomojis, stylized Arabic numerals, and paralinguistic expressions. Furthermore, this study also focuses on multimodal discourse practices, and offers analysis on the uses of various semiotic resources beyond linguistic codes or pure written texts. The multimodal discourse strategies were analyzed along with the

contextualization of meanings through multimodal interfaces of the two selected CMC sites and the similarities/differences between them. For instance, I identified the use of kaomojis, emoticons and emojis on both Weibo and bilibili.com, and determined if certain meaning making strategies are more common on one site than the other. Then, I analyzed the CMC facilitations of both sites in order to discuss the possible differences in multimodal accommodations that might contribute to this difference.

Thus, the current study describes, analyzes and discusses the types and strategies of using various semiotic resources in Chinese online communication. The extensive data collection maximizes the representativeness of the online communication patterns of Chinese users. At the same time, the selection of two popular research sites also strengthens the generalizability of the findings compared with less popular sites with limited (and more specialized) online participants. Third, the detailed description and discussion of the linguistic and CMC contexts contribute to the quality of the study. The context of the study is vital to any discourse analytic research. In this study, the discussion of the macro linguistic context of mainland China and the CMC technological interfaces and affordances of two CMC sites offers detailed contextualization of the discourse practices identified.

Finally, the study adopted a systematic and rigorous data collection and sampling strategy. As discussed before, the data are sampled in terms of time and phenomenon, which are precisely operationalized. The choice of collecting only the top posts/comments daily (Weibo) and comments from top videos/comments in the commentary board twice a week also ensures a certain degree of randomization and representativeness in data sampling. Furthermore, both screenshots and texts were collected to demonstrate the context of communication to address the

multimodality of CMC platforms. All of these features of the research design contribute to the quality of this study.

The Role of the Researcher

My role as the researcher in this study was mainly as a non-participant observer of online interactions. While documenting and sampling online interactions that fit the parameters of the current study, I did not interrupt or participate in the ongoing communication. In other words, my role as a researcher was close to that of an "archiver" in the process of data collection. Nevertheless, my role as an insider of the target sociolinguistic population and CMC sites was helpful in the later stages of interpretation. This is mainly due to three factors. Firstly, I am socioculturally and sociolinguistically proficient in Chinese online and offline communicative practices. Born and raised in mainland China, I have lived most of my life (22 years) in PRC, and am an insider in terms of Chinese language knowledge and other meaning making resources from mainland China. Secondly, I am proficient in online communication technology and Chinese popular culture of younger generations. In fact, I have been a frequent user of both Weibo and bilibili.com for several years. I registered on Weibo on May 27, 2011, and have been a regular user of bilibili.com for approximately four years. Therefore, I am familiar with the CMC sites' user interface, multimodal features and popular topics/themes of interactions. Furthermore, my second foreign language, Japanese, offers another insider perspective on the data from the two CMC sites. Especially for bilibili.com, which is heavily influenced by Japanese comics and animations, my knowledge of Japanese language also enables me to identify patterns of language borrowing and uses of Japanese stylized emoticons (i.e., kaomojis).

It is also worth mentioning that I have registered for a Weibo account, but not for bilibili.com. This is due to the fact that although unregistered users can read Weibo posts, they

cannot access the drop-down function for each post to read other users' comments. On the contrary, bilibili.com does not require website registration for online users to view the "bullet curtain" comments. In fact, a "tourist" viewer ("游客" - Yóukè in Chinese Mandarin) who is not registered can also use the "bullet curtain" function to comment on the video, although some options and features such as font color, font size, and so on are limited to registered users. In this way, I was able to collect and sample data from both CMC sites without restrictions of access.

Rationale for a Screen-based CMC Research Approach

The proposed study adopts a "screen-based" CMC research approach (Androutsopoulos, 2013b). In other words, all data were collected through interactions on screen and the research is mainly focused on the analysis of discourse practices. Admittedly, a screen-based approach for CMC research has its limitations. First, despite its advantages, screen-based CMC research design lacks an emic perspective from the actual actors of online communication. Although a screen-based approach is convenient in dealing with data of public domain and large sizes, it does not provide detailed accounts on the experience or background knowledge of individual online users, which requires a more "user-based" approach (Androutsopoulos, 2013b) that allows researchers to investigate online interactions as social practices connected with offline activities. A user-based approach may offer more in-depth understanding of the motivation, awareness and evaluation of online users' choices of linguistic and semiotic resources. In addition, by including self-reportation on the social actors of discourse practices, researchers may be able to obtain the interpretations of the online users, which are less accessible via a "screen-based" research approach (Androutsopoulos, 2008).

Nevertheless, considering the purpose of the current study which is to investigate the regularity, patterns, as well as creativity of the non-standard online literacy practices, a screen-

based research approach is more appropriate. Firstly, the purpose of the study is to investigate the heteroglossic online communication of Chinese users in diverse online contexts. The focus is mainly on discovering and analyzing the linguistic and other semiotic resources adopted by Chinese online users, and how they facilitate online interactions that reflect heteroglossic features of communication. While using a user-based approach might provide some understanding of users' motivations and their experience of online communication, the current study emphasizes on the most common uses of various meaning making conventions by Chinese users, and how heteroglossic features, such as dialogic communication, are manifested through CMC. Secondly, in order to provide an in-depth understanding of the Chinese online users through a user-based approach, it is crucial for the researcher to fully interact with the online users of both public sites. However, since my role as the researcher is a distant "observer" or "archiver" of the online interactions, there are no personal connections between me and the anonymous online users from both Weibo and bilibili.com. Furthermore, the two selected CMC web spaces are either public (i.e., bilibili.com) or semi-public (i.e., Weibo), which suggest that the online users' mutual background knowledge is often incomplete (Androutsopoulos, 2013b). Therefore, establishing full contact and conducting online interviews with the online anonymous individuals is unrealistic. A screen-based approach avoids this issue and concentrates on the most regular online users of the two sites, drawing interpretations and conclusions from discursive practices observed and analyzed.

Summary of the Chapter

This chapter provided a detailed description of the research methodology for the current study. The two target CMC sites, the micro-blogging site "Weibo" and video-sharing site

"bilibili.com," play significant roles in the online interactions in mainland China. Each site takes a huge share of online activities of Chinese users within and beyond mainland China. At the same time, they both facilitate digital communication by offering communicative spaces, such as comments and posts, and multimodal meaning making resources, such as emoji sets and the "bullet curtain" commentary system. Second, the data collection and sampling methodology procedures were discussed. The data collection method was based on the online affordance provided by both CMC sites in terms of the total amount and frequency for data collection, and the sampling strategy was designed to reflect the representation and systematicity of the desired online interactions, including various meaning making strategies (e.g., uses of languages, emoticons, and so on). In addition, the result and implications of the one-week pilot study ensured the feasibility of the proposed research design. Finally, using examples from similar studies that focus on Chinese online literacy practices, the method for data analysis was described. The aim was to fully capture the complexity and multifunctionality of Chinese online communication in terms of not only linguistic features, but also other semiotic resources adopted by Chinese users of Weibo and bilibili.com. In this way, I am in the hope of demonstrating the heteroglossic communication and diverse literacy practices of Chinese online users.

CHAPTER IV. FINDINGS

Summary of Non-Standard Literacy Practices

The two months of data collection from the chosen CMC sites, Weibo and bilibili.com, yielded a total of 30,005 non-standard literacy practices. For Weibo, 2,021 of these target literacy practices appeared in 310 "Hot Weibo" posts and in 1,550 comments responding to these posts. For bilibili.com, 27,438 of the target literacy practices were identified from the "bullet curtain" comments in 88 eligible videos. Besides these comments, 546 of the target literacy practices were also identified from 440 traditional text-box comments found under the sampled videos from bilibili.com. The table below presents a general summary of the findings from Weibo and bilibili.com.

Types of Literacy Practices	Weibo	bilibili.com "Bullet Curtain"	bilibili.com Text-box
Stylized Chinese Mandarin	354	9315	144
Stylized dialect-accented Chinese	25	476	5
Romanized Chinese	35	702	10
Chinese radicals	2	42	1
Non-standard Chinese character expressions	44	2260	23
Traditional Chinese characters	28	196	3
Foreign language expressions	152	2969	124
Foreign language transliterations	90	2958	11
Capitalized Chinese	1	26	0

Table 7. Texts including non-standard literacy practices from Weibo and bilibili.com

Table 7 (Continued)

Types of Literacy Practices	Weibo	bilibili.com "Bullet Curtain"	bilibili.com Text-box
Kaomojis and emoticons	14	2249	181
Emojis	1248	527	16
Stylized Arabic numerals	12	4914	19
Orthographic representations of paralinguistic features	4	394	4
Manually typed emojis	9	77	5
Others	3	333	0
Total	2021	27438	546

The following sections provide detailed analyses of the non-standard literacy practices found on the three communicative spaces (i.e., Weibo posts/comments, bilibili.com "bullet curtain" comments, and bilibili.com text-box comments). I describe and analyze the most frequently adopted non-standard literacy practice types and select the representative examples from these practices for further in-depth analysis. Specifically, as the "bullet curtain" comments compose the main part of the sampled data, all types of literacy practices observed in these comments are analyzed; for Weibo posts/comments and bilibili.com text-box comments, only the most frequently adopted literacy practice types are analyzed. In addition, I include screenshots of each example discussed in order to contextualize the literacy practices and their communicative functions.

Non-Standard Literacy Practices in Weibo

From the micro-blogging site Weibo, a total of 2,021 target literacy practices were identified from 310 Weibo posts and 1550 comments. Among those practices, all non-standard literacy practice types discussed in the methodology were found to be adopted by Weibo users, with the exception of emoticons. Figure 10 below provides an overview of the distribution of the literacy practice types in Weibo.

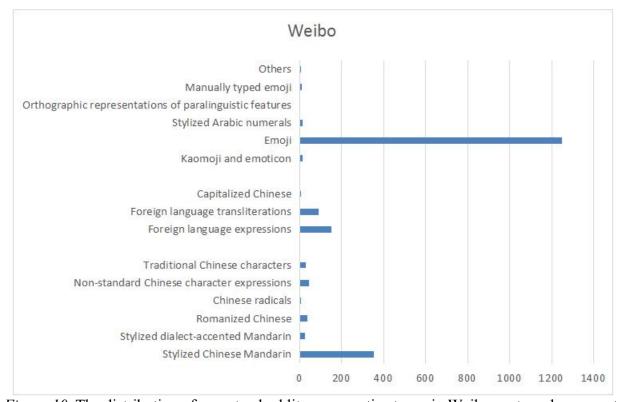


Figure 10. The distribution of non-standard literacy practice types in Weibo posts and comments As shown in Figure 10, emojis are the most frequently utilized literacy practice type with 1248 instances, followed by Stylized Chinese Mandarin with 354 instances, Foreign Language Expressions with 152 instances, and Foreign Language transliterations with 90 instances. The following sections provide detailed analyses of how these literacy practices are adopted by Weibo users.

Using Emojis in Weibo

Similar to social networking sites such as Facebook and Twitter, Weibo offers its users with an array of multimodal signs for meaning making, including various types of emojis. With a total of 1248 observed uses, emojis are important means of communication for Weibo users. In addition, Weibo provides an extra feature for emojis as most of them are animated and formatted

as the "Graphics Interchange Format" (GIF). These animated emojis are periodically updated with new characters, objects and signs, which often follow the latest trends of online communication and popular cultures. Figure 10 below shows a typical Weibo post with an emoji:



Figure 11. An emoji in a Weibo post: "The baby is coming (emoji: heart)"

In this post, an emoji that resembles a heart is used by the blogger after the status post of the author's upcoming newborn baby. The emoji is also animated in which the heart bounces to resemble heart beats. Emojis are also extensively used in the Weibo commentary sections with text, serving as paralinguistic features that complement the message of the text. Figure 12 below demonstrates a typical Weibo comment with an emoji:



Figure 12. Using an emoji in a Weibo comment: "This speaks of my mind (emoji: smile). But give praise to Jiang Xin's (a famous Chinese TV actor) performance. It is very appealing. Have to give a thumbs up."

The abundant choices of emojis provided by Weibo are frequently adopted to indicate

various types of emotions and feelings. In some cases, the emojis become the main body of

Weibo posts and/or comments following the written texts (see Figure 13):



Figure 13. Emojis in a Weibo comment: "Thank you big big (emojis: 'doge' and 'laugh while taking photos')"

In Figure 13, the phrase "big big" is a direct translation from Chinese "大大". The original meaning of this phrase is an expression for the elder brother of a person's father in some northern Chinese dialects. It is also currently used to describe someone who is famous or possesses remarkable skills. In the Weibo comment, "big big" is a stylized Chinese Mandarin expression which means someone who has exceptional skills, and it was used to praise the original blogger that this comment is responding to. In this example, emojis of "doge" and "laugh while taking photos" to reach an intensifying effect.

Using Stylized Chinese Mandarin in Weibo

The second most adopted literacy practice type is the stylized Chinese Mandarin with a total of 354 instances observed. Similar to the preliminary findings of the pilot study, stylized Chinese Mandarin is a common type of non-standard literacy practice found in Chinese online discourse. These Chinese expressions are "stylized" as they did not exist in standard Chinese before, or have been reconceptualized with new meanings, in online communication (Yang, 2007). Figure 14 below shows a Weibo comment with the use of stylized Chinese Mandarin:

哈哈哈哈哈哈高考生考研狗	
7月1日 13:21	回复 凸 87

Figure 14. Stylized Chinese Mandarin in a Weibo post: "Ha ha ha ha my heart feels hurt for the students of college entrance exams and dogs of graduate school entrance exams."

In the example of Figure 14, the Weibo author expresses her empathy for the students who are about to take the college entrance exams and the graduate school entrance exams. Specifically, the author uses "狗" (dog) to describe this unique population. This stylization of humans as dogs usually are usually adopted to refer to people who are struggling with or experiencing difficulties in various aspects of life. For instance, "dog" is often used for people who cannot find romantic partners in China, generally referred to as "单身狗" - single dog.

One of the most frequently observed stylized Chinese Mandarin is the use of "赞" (Zàn) as appreciation. A total of 25 instances of this usage was observed in Weibo. In standard Chinese Mandarin, "赞" is often used with other characters, such as "美" (beauty) in "赞美", to express appreciation/admiration. This meaning is seldom expressed with individual uses of "赞" in standard Chinese Mandarin. However, with the spread of micro-blogging and social networking sites in China, using the character "赞" alone for appreciation/admiration has become increasingly popular. Many CMC sites adopt this character for the similar function of "like" or "thumbs up" found in Western social media sites (e.g., Twitter and Facebook). In Weibo, "赞" is also adopted in terms of this function, and users can also click the "thumb up" button at the bottom right corner if he/she likes or agrees with the posts or comments. Figure 15 below shows how "赞" is used in a Weibo comment:



Figure 15. "赞" in a Weibo comment: "I lost weight from 160 to 92; like ("赞") me and I will tell you the method (emojis: brown and yellow 'doge')"

In this example, the user expresses his/her willingness to share the weight loss method only if he/she receives enough "likes" (赞). In this context, "赞" is similar to the meaning of "like" in English. In addition, by clicking the "thumb up" button at the bottom right corner, the other users of Weibo will be able to perform the function of "like" found in many other social media websites (e.g., Twitter and Facebook).

Besides phrasal expressions, stylized Chinese Mandarin can also be presented in complete sentences. Figure 16 demonstrates one of the most commonly adopted uses of stylized Chinese Mandarin in a syntactic structure:



Figure 16. Stylized Chinese Mandarin through a syntactic structure In this comment, the stylized Chinese Mandarin is represented through a sentence structure of "可以, 这很" (good, this is very) plus a noun. The function of this sentence structure is to use the characteristics, features or attributes of the noun as an adjective to describe someone or something. In the example of Figure 16, the comment means "good, this is very Taylor (emoji: smile)." The user was responding to a post that describes the news of that day - Taylor Swift was found that she was dating her new boyfriend Tom Hiddleston. The expression was used to describe that the singer Taylor Swift constantly changes her romantic partner, and "being very Taylor" means that the singer was doing what she usually does - frequently changing her boyfriends. In this stylized sentence, the noun is used as an adjective to describe the features associated with this noun, which does not exist in standard Chinese Mandarin.

Using Foreign Language Expressions in Weibo

In the Weibo posts and comments collected, a total of 152 instances of foreign language expressions were identified. These practices are based on the scripts of two languages - English (146 instances) and Korean (6 instances).

English Expressions

While English is neither a second language nor a lingua franca in mainland China, it still plays an important role as a required foreign language for most compulsive and secondary education of the nation. Furthermore, language choices online are often not reflected in offline communication, and English with its global status still has its influence on language choices of online communication (Lee, 2017). In the current study, the literacy practices featuring English are manifested through various strategies, including direct adoptions of English expressions,

code-mixing and code-meshing of English and other languages, and adoptions of English oriented symbols.

The first type of English practice observed is that some Weibo users compose their posts and comments completely in English texts. In other words, English is adopted as the only linguistic code used in both posts and comments. There are seven examples from Weibo that are composed in this manner, and two of them were posted from two foreign celebrities' official Weibo accounts. A sample Weibo comment from the remaining five examples is presented below to demonstrate how a Chinese user adopts an English only strategy in his/her comment:

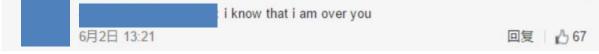


Figure 17. Using English only in a Weibo post: "i know that i am over you"

In this comment, the user wrote the text entirely in English. Despite the missing capitalizations of the first-person pronouns and a missing period, the sentence is complete, grammatical and standard English.

Another type of English uses observed in Weibo is code-mixing between English and other languages. It is the most frequently adopted strategy of non-standard literacy practices that involves English, with 133 observed uses. An example is demonstrated in Figure 18 below:

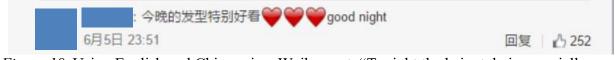


Figure 18. Using English and Chinese in a Weibo post: "Tonight the hair style is especially good looking (emojis: heart) good night"

In this example, "good night" is written in the English with the rest of the comments in Chinese and a set of "heart" emojis. The entire comment is code-mixed with simplified Chinese characters and an English formulaic expression. In addition, English expressions can also be used in combination with Chinese characters to form more creative code-meshing expressions as well (see Figure 19):



Figure 19. Using English-Chinese code-mixing in a Weibo post: "I only get to know one point that at age of 20, I need to get rid of being poor instead of being single"

In this comment, the English word "get" is used in combination with the Chinese character "到" (a Chinese character that describes results). Together, they form the meaning of "get to know" or "understand". Besides English code-mixing with words and phrases, Weibo users also adopt the syllabic features of English to form new expressions as well (see the highlighted example in Figure 20):



Figure 20. Using the syllabic features of English for a new mixed expression in a Weibo post In the Weibo post above, the highlighted expression "原 PO" means "the person who wrote the original post". It is used to refer to either the person who wrote the post in the first place, or the person who originally posted the content. Here, "PO" is used as a shortening for "post" by adopting the syllabic features of the English word. This stylization may be resulted from the Chinese Mandarin phonetic system through which characters end with vowels. In this way, Chinese online users adopt the letters "P" and "O" with the omission of the consonants, which is combined with the character "原" (original) to form the meaning of "the original post" or "the person who originally posted this (message/content)".

Finally, Weibo users adopt English symbols in their posts and comments as well. Weibo users adopt the ampersand symbol - "&", which does not exist in Chinese, in the same meaning as "and" in English. A total of six instances were identified in the study. An example is presented in Figure 21 below:



The post in English means "Newbies must read the correct order to do your makeup. Includes skin care & putting up makeup & remove makeup, all in one post~ From now on stop being a makeup newbie (emoji: cheer)." The blogger in this post used two "&"s to connect three of the main procedures in the makeup instruction.

Korean Expressions

Besides English expressions, several instances of Korean expressions were also observed in Weibo. These practices were all adopted by users who posted their comments under the status updates of Korean celebrities' official Weibo accounts. A total of six instances of Korean expressions were found.



Figure 22. Korean expressions in a Weibo comment

In the example from Figure 22 above, Korean expressions were adopted along with other languages to express the user's admiration of a K-pop (Korean pop music) star. The comment starts with a transliterated Korean expression "Oppa" which means an older brother, and is used as an endearment of the Korean celebrity. It is then followed by English "it's you" and several emojis of "pointing to the right" and "running men". Then the user typed "사랑해" (salanghae) in Korean script which means "I love you", and is then followed again by English "I love u" in which "you" is substituted with "u" as a shorthand. The comment is then added with more emojis of "running men" and ended with "I love you" in three languages as Simplified Chinese, Korean, and English. In this particular message, Korean script, Romanized Korean transliterations, Chinese characters, English script and shorthand English expressions, and emojis are all incorporated by the user. The Korean expression is parallel in terms of meaning with the Chinese and English expressions of "I love you." With the recent popularity of K-pop and Korean dramas, the expression "사랑해" is becoming more popular in Chinese online discourse. The user of the sample comment demonstrates her complex linguistic repertoire by mixing various linguistic codes along with multimodal expressions (i.e., emojis).

Using Foreign Language Transliterations in Weibo

A total of 90 instances of foreign language transliterations were observed in Weibo. Chinese users often adopt the phonetic and typological features of languages other than Chinese Mandarin, and transliterate foreign expressions into Chinese characters. In this study, three foreign languages - English, Japanese and Korean - were identified in transliteration practices.

Transliterations of English Expressions

Besides the adoptions of English expressions, Chinese transliterations of English expressions are also utilized by Weibo users. A total of 33 instances of Chinese transliterations of English were identified. The following comment shows a typical example:



Figure 23. Using Chinese transliteration of English in a Weibo post: "Elisabeth!!! Oh god Elisabeth!!! 23333"

In this example, "伊丽莎白" (Yīlìshābái) is the conventional Chinese translation of the English name "Elisabeth." The user was commenting on the video content in which a girl named Elisabeth was called by her boyfriend constantly in the same line as "Elisabeth!!! Oh god Elisabeth!!!" due to her inappropriate behaviors. The Weibo user translated and transliterated the whole line into Chinese characters. In this case, the English expression, "Oh god," was transliterated in Chinese as "哦嘎的" (Ó gā de) due to their resemblance in pronunciation.

The transliterations of English are adopted through sound resemblance. However, similarities in writings was also utilized by Weibo users in their transliteration practices of other languages, such as Japanese.

Transliterations of Japanese Expressions

Japanese is also transliterated by Weibo users. A total of 45 instances of transliterations of Japanese expressions were observed in Weibo. Besides transliterations through phonetic resemblance (as observed in transliterated English), transliterations of Japanese expressions also include the adoption of Japanese Kanji through similar written texts. This is mainly due to the resemblance of the Chinese characters and Japanese Kanji, as well as the increasing influence of Japanese culture in mainland China. Similar to the transliterations of English expressions, the phonetic features of Japanese and Chinese are also used for transliterations. Figure 24 below demonstrates an example of phonetic transliterations:



Figure 24. Using phonetic features for the transliteration of a Japanese expression In this comment, the user wrote "Seeking marriage. My breasts are bigger than papi Chan (emoji: 'doge')." The highlighted expression, "papi 酱" is the nick name for a famous Chinese online celebrity. Her name is composed of Romanized letters as "papi" and a Chinese character "酱". The original meaning of "酱" means "sauce", and the pronunciation of this character (Jiàng) resembles the Japanese honorific suffix - "ちゃん" (Chan). As "ちゃん" in Japanese is often used to refer to females, it is therefore adopted by the online celebrity and her fans in her nick name through transliterations.

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At the same time, Japanese expressions can also be transliterated through similarities between Japanese Kanji and Chinese characters. The example below shows how Japanese Kanji expressions can be transliterated through Chinese characters:



Figure 25. Similarities between Japanese Kanji and Chinese characters for the transliteration of a Japanese expression

In this comment, the highlighted expression "元气" is in fact the transliteration of the Japanese expression "元気" (げんき). The original meaning of the Japanese expression is to describe

someone full of energy or happiness. The similar meaning is adopted by Chinese users as the Chinese characters of "元气" resemble the Japanese Kanji of "元気" in the written form.

In addition, Weibo users also adopt signs and symbols from Japanese ACG (animation, comics and games) culture through transliterations of written texts as well. For instance, Weibo users adopt the Kanji - " $\ddot{\mathfrak{h}}$ " ($\dot{\mathfrak{t}}$ $\dot{\mathfrak{L}}$) from Japanese to suggest people or things that are lovable and cute. Figure 26 shows an example of this usage:



Figure 26. Using concepts from Japanese pop culture in a Weibo comment

The translation of this comment means "I suddenly start liking this (kaomoji: 'blushed'; emoji: 'shy') @十七 zz". Originally, "萌" (もえ) in Japanese means the stage of sprouting of grass and trees. This meaning was later adopted by the Japanese ACG community to mean someone or something as lovable and cute. Since the Kanji of "萌" also exists as a Chinese character, it is therefore adopted by Chinese ACG fans and later other online communities for the similar meaning. "萌" in Chinese can be used as an adjective to describe someone or something as lovable and cute, or as a verb similar to the meanings of "love" or "like".

Transliterations of Korean Expressions

Last but not least, Korean transliterations were also found in Weibo with a total of 12 instances. Similar to the direct use of Korean expressions, transliterated Korean texts were mostly observed in the posts and comments from the public accounts of Korean celebrities on Weibo. In this study, two Korean expressions, " Ω ^H" (Oppa) and " \succeq " (Wuli) were found to be transliterated into Chinese characters or Romanized letters.

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Figure 27. Using "欧巴" as transliteration of "오빠" in a Weibo comment: "Oppa what happened to you today"

Figure 27 above shows a Weibo comment in which "오빠" (Oppa) is transliterated into Chinese as "欧巴" (Ōu bā). In Korean, "오빠" is used only by females to nominate older brothers and/or older men who they trust. This expression is transliterated into Chinese as "欧 巴" (Ōu bā) for the phonetic resemblance. Furthermore, the meaning of "오빠" also slightly changes after transliteration. The transliterated expression is generally used to nominate handsome or favorable men despite of ages. In the example, the Weibo user, who is a fan of the Korean celebrity, uses "欧巴" to nominate this celebrity.

While Chinese characters are used for " \mathfrak{Q} , Romanized letters are also adopted for the transliteration of a Korean expression - " \succeq " (Wuli). Originally, " \succeq " means "my" or "our" and is often used by fans of K-pop to name their idols. This expression is also adopted by Chinese users through the transliteration of sounds, and can be written in Romanized letters as "wuli." The example below shows how "wuli" is adopted in a Weibo comment (Figure 28):



Figure 28. Using "wuli" in a Weibo comment

In the highlighted part of this comment, "wuli" is adopted as the Romanization of " \succeq " by the user to call the famous Korean K-pop group - "Big Bang". This expression can also be used as a prefix for other celebrities. It is also worth mentioning that English abbreviation is also included

in this comment. The expression "cvip" is the abbreviation of "China V.I.P". The fans of Big Bang call themselves "VIP" as this expression is part of the K-pop group's debut song title "BIGBANG IS V.I.P". The letter "c" here means "China" which means the Big Bang fans in China.

Besides the literacy practice types discussed above (i.e., emojis, stylized Chinese Mandarin, foreign language expressions, and foreign language transliterations), all the other ten literacy practice types were also observed in Weibo posts and comments. However, due to the small number of tokens, they will not be discussed in this section. Instead, all literacy practice types will be discussed in the following section on bilibili.com "bullet curtain" comments.

Non-Standard Literacy Practices in the "Bullet Curtain" Comments of Bilibili.com

With 27,438 non-standard literacy practices in tokens identified, the "bullet curtain" comments of bilibili.com represent the bulk of the data collected for the study. This is due to the fact that the dynamic "bullet curtain" format allow for a rapid succession of posts, thereby yielding much more data than the more static posts or comments. The identified non-standard literacy practices were observed in a total of 88 videos. All types of literacy practices proposed in the methodology were found. Figure 29 shows the distribution of literacy practices of the "bullet curtain" comments:

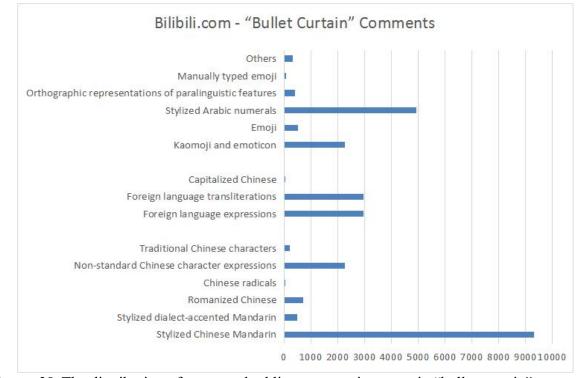


Figure 29. The distribution of non-standard literacy practice types in "bullet curtain" comments As shown in Figure 29, stylized Chinese Mandarin is the most adopted literacy practices with 9,315 instances, followed by stylized Arabic numerals (49,14). Besides these two types of literacy practices, foreign language expressions (2,969), foreign language transliterations (2,958), non-standard Chinese character expressions (2,260), and kaomojis and emoticons (2,249) are also extensively utilized by bilibili.com users. To better capture the data distribution, a table of percentages of all literacy practices in the "bullet curtain" comments is provided below:

ible 6. Percentages of meracy practice types in jourier	cuitani comme
Types of Literacy Practices	Percentages
Stylized Chinese Mandarin	33.9%
Stylized dialect-accented Chinese	1.7%
Romanized Chinese	2.6%
Chinese radicals	0.2%
Non-standard Chinese character expressions	8.2%
Traditional Chinese characters	0.7%

Table 8. Percentages of literacy practice types in "bullet curtain" comments

Table 8 (Continued)	
Types of Literacy Practices	Percentages
Foreign language expressions	10.8%
Foreign language transliterations	10.8%
Capitalized Chinese	0.1%
Kaomojis and emoticons	8.2%
Emojis	1.9%
Stylized Arabic numerals	17.9%
Orthographic representations of paralinguistic features	1.4%
Manually typed emojis	0.3%
Others	1.3%

It is worth noting that these "bullet curtain" comments often include more than one type of literacy practices. In the following sections, I describe the most frequently adopted literacy practices and analyze how these practices are deployed by bilibili.com users.

Using Stylized Chinese Mandarin in "Bullet Curtain" Comments

Similar to the findings of Weibo, stylized Chinese Mandarin is among the most frequently adopted literacy practices by Chinese users in "bullet curtain" comments. With 33.9% of all identified non-standard literacy practices, stylized Chinese Mandarin makes up to over one third of the data. These Chinese Mandarin expressions are "stylized" meaning that they did not exist in standard Chinese before, and have gained new meanings in online communication.

One style of the most commonly observed expressions in stylized Chinese Mandarin is the concept of "毒" (Dú) which literally means "toxin/poison" or "drugs/being addicted to drugs" in English. This expression is adopted by bilibili.com users to suggest things, such as songs or animations, as excessively addictive. A total of 1636 comments that involve this expression were identified from "bullet curtain" comments. The example below shows how this expression is typically used (see Figure 30):



中毒 更深 了

Poisoned even deeper (Chinese pragmatic particle)

Figurative meaning: I am more addicted to it.

In the example above, "毒" is used metaphorically to describe the user's feeling as he/she is becoming more addicted to the video content. In addition to the direct use of the character "毒," users of bilibili.com also exploit the concept with other expressions that are related to the use of poison or drugs. For instance:

- 我还能吸
- I still can inhale

Figurative meaning: I can watch more of this (video).

The literal meaning for the example above means the user can inhale or use more drugs. However, this meaning is used metaphorically to suggest that the user wants to keep watching the video which for him/her is addictive. The character "吸" (inhale/suck) in Chinese is a verb often used in combination with "毒" (toxin/poison or drugs) and together the expression "吸毒" means "using drugs". However, in online communication of bilibili.com, the literal meaning has shifted for a different explanation.

The second mostly adopted expression of stylized Chinese Mandarin in "bullet curtain" comments is "表白" (Biǎobái) with a total of 933 instances. The literal meaning of "表白" in English means "to confess one's love to somebody". The example below shows a typical "bullet curtain" comment in which this expression is highlighted (see Figure 31):



Figure 31. Using "表白" in a "bullet curtain" comment

表白 天依

Confess (my love to) Tianyi

Figurative meaning: I admire Tianyi.

"天依" in the example above is the user name of the vocal singer featured in the video. "表白" here is not used for its original meaning of love confession. The user of this comment utilizes "表白" to show his/her appreciation of the singer and her performance. The communicative function of "表白" has changed from the romantic expression/proposal to demonstration of appreciation/admiration. The same expression can also be adopted to show the users' admiration toward certain functional characters as well. For instance:

表白 雷姆

Confess my love to Leimu

Figurative meaning: I admire Leimu.

In this example, "表白" is used to show the users' admiration towards a fictional Japanese animation character, Leimu, who was also featured in a video. Finally, "表白" is also frequently used individually, and users often simply type "表白" as the entire content of their "bullet curtain" comments. When "表白" is adopted in this manner, the communicative function of showing appreciation/admiration may be also extended to another usage similar to the "like" or "thumbs up" functions in social networking sites such as Facebook and Twitter.

Another frequently adopted stylized Chinese Mandarin is the expression of " $\overline{77}$ " (Wū). A total of 602 uses of " $\overline{77}$ " was found in the "bullet curtain" comments. In English, " $\overline{77}$ " can be directly translated as "dirty" or "filthy" in the sense of uncleanness. This expression has been utilized by bilibili.com users to express something that is sexual and/or obscene. Figure 32 shows how this expression is used over a bilibili.com video:



Figure 32. Using "污" in a "bullet curtain" comment

In Figure 30, "污" is used in three comments. In the highlighted comment, "污" is used within a sentence:

- 我的 天, 这么 污
- My heavens, so dirty/filthy

Figurative meaning: My goodness. This is so obscene.

In the video, two pandas were playing with each other. However, for some viewers, the positions of the two pandas resemble forms of sexual activities. Therefore, some users commented in a joking manner that it is sexual by using "75". Besides the highlighted example, two instances of using "75" can also be found in Figure 32. In those comments, "75" is used individually. All three examples demonstrate the metaphorical extension of "75" as sexual which is usually used for its literal meaning of uncleanness in Chinese. This example demonstrates a "carnivalesque" (Bakhtin, 1984) communication style which involves taboo and often vulgar content.

In addition to using " $\overline{77}$ " as an adjective to describe sexual content, some bilibili.com users exploit the playfulness of the sound of " $\overline{77}$ " (Wū) while they compose their comments towards sexual orientation. For instance, some users use " $\overline{77}$ " (Wū) to imitate the the sound of traditional coal-powered trains for a playful effect. Figure 33 below demonstrates how this language play is deployed:



Figure 33. The concept of a moving train to symbolize the sound of " $\overline{7}$ " (Wū)

In the two highlighted comments in Figure 31 above, two users worked together to play with the meaning of " $\overleftarrow{7}$." In the comment on the bottom, the user typed:

开 火车 了

Driving a train (Chinese particle)

Figurative meaning: Let's watch this sexual video.

The Figurative meaning of "driving a train" comes from a folk Chinese music video - "老司机,

带带我" (Old driver, please give me a ride), which features a countryside driver who picks up

women in his car. The video soon became famous due to its low-budget production and the sexual connotation of its lyrics, and the expression "上车" (get in the car) was adopted by Chinese online users to describe a situation in which someone is encouraged to do or watch something sexual. Chinese users creatively reference other transportation modes, such as a train adopted in the comment above, for a similar purpose. At the same time, another user of the highlighted comment typed "疗 \sim 方 \sim \sim \sim \sim (Wū \sim Wū \sim Wū \sim) to mimic the sound of a traditional coal-powered train. While the original Chinese character that describes the sound of the train is "呜" (Wū), the user adopted " γ " instead as it not only resembles the sound of "呜", but also means "dirty", thus doubly creating a double extended sexual content that both users were commenting on. Similar to the previous exmple, the user demonstrates features of creative and "carnivalesque" communication in this playful expression.

Using Stylized Arabic Numerals in "Bullet Curtain" Comments

Stylized Arabic numerals are the second most frequently adopted non-standard literacy practice by bilibili.com users. These numerals are used in ways that go beyond the conventional cardinal and ordinal meanings (Zhang, 2017). In the study, a total of 4,914 instances of stylized Arabic numerals were identified from "bullet curtain" comments. These numerals were adopted for their phonetic and/or symbolic features to express communicative functions such as representations of paralanguage, appreciation, naming, among others.

Among all uses of stylized Arabic numerals, "233" is the most frequently adopted stylized numerals with a total of 4,438 instances. "233" expresses the meaning of laughter. The examples in Figure 34 below demonstrate how "233" is used:



Figure 34. Using "233" to express laughter

It is believed that fans of Japanese ACG (animations, comics and games) created this expression based on an animated graphic numbered "023" in which a cartoon character was laughing. Users of bilibili.com have adopted the numerals with the symbolic meaning of laughter, and use "233" for laughter. Furthermore, users also tend to repeat the number "3" in order to demonstrate a sustained or intensified laughter, as the highlighted example shows in Figure 34. This expression can also be used with languages and other meaning making signs as well (see the highlighted comment in Figure 35).



Figure 35. Using "233" with Chinese and English

In the highlighted example shown above, "233" is used with Chinese and English. In the comment "仙女好 high2333333", "仙女" (Goddess) represents the nickname of the person to the right in the video. The comment can be translated literally as "Goddess is very high 2333333". In this comment, the English word "high" is used differently from its original meaning of feeling high after using drugs. Here, "high" is referred to as being happy or excited. The expression of "233" is used to show the user's laughter with repetitions of "3" for intensification. With 4,438 instances out of a total of 4914 identified stylized Arabic numeral uses, the function of "233" as laughter is definitely a convention in this platform and one that is used by many bilibili.com users. This convention has also been observed in Weibo as well.

Besides laughter, numerals can also be used as representations of other types of paralanguage. Another frequently used numeral for this function is "5" (Wǔ). Bilibili.com users

often use stacks of "5" to resemble the crying and weeping sound in Chinese as " $\stackrel{\text{ph}}{=}$ " (W \bar{u}) (see Figure 36 below):



Figure 36. "5" as the expression of crying and weeping

In the highlighted comment, several types of non-standard literacy practices are involved:

小忍 卡哇伊 我的 女神 老婆,55555

Xiaoren kawaii, my goddess wife, 55555

Figurative meaning: Xiao ren is cute. My goddess wife, 55555 (the weeping sound).

小忍(Xiaoren) is the female animation character shown in the screenshot. The user adopts "卡哇 伊"(Kǎ wā yī) as the Chinese transliteration of the Japanese expression かわいい (Kawaii) which means "cute". Two stylized Chinese Mandarin expressions, "女神" (goddess) and "老婆" (wife) which are both used to nominate favorable females instead of their original meanings, are also adopted in the comment. The user ends his/her comment with a set of repeated "5", as an expression of the weeping sound to show his/her emotion of excitement (Zhang, 2017).

Another frequently adopted practice in stylized Arabic numerals is the use of mathematical symbols (e.g., Zhang, 2017). Symbols such as "+" (plus) and "*" (multiply) are utilized to show support or agreement toward the video content as well as comments from other viewers. From the data collected, a total of 161 such symbols were identified with 87 instances of "+" and "74" instances of "*". The highlighted comments in Figure 37 below demonstrate how "+" is used:



Figure 37. Using "+" in a "bullet curtain" comment

In the top highlighted comment from Figure 37, the "+" sign appears with number "1" after the comment "潮汕人" which means people (人) from Chaoshan (潮汕) area in Guangdong, China. This comment is related to a previous comment in which another user identified himself/herself as a person from Chaoshan. Therefore, the user of the current comment expresses his/her identity

as people from Chaoshan by using the "+1" sign. In this example, "+1" was adopted to show the user's regional affiliation in terms of identity and birthplace. In the other highlighted comment from Figure 35, the "+" signed was used with a Roman letter "N" after the comment " $i \neq j$ " which is a stylized Chinese Mandarin that describes something as sexual and/or obscene. This comment is also related to multiple previous comments in which other users all suggested that the video content is " $i \neq j$ " with sexual content. As a mathematical symbol, the Roman letter "N" is often used to suggest numbers greater than 2. Therefore, "N" was adopted instead of "1" as more than two viewers have expressed the same idea. In this example, "+N" exhibits the communicative function of showing agreement, affiliation, and support. In addition to the "+" sign, the multiplication sign "*" was also found to be adopted for a similar communicative function.

In addition, the users of bilibili.com also adopt stylized Arabic numerals to represent phonetic features. Among those practices, "6" is found to be the most frequently adopted stylized Arabic numeral with 80 instances of uses. Figure 38 shows a typical "bullet curtain" comment with the use of "6":

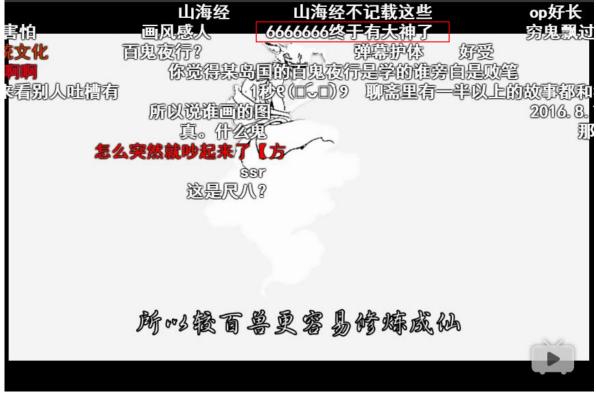


Figure 38. Using "6" to show admiration in a "bullet curtain" comment

In the highlighted comment, "6" (Liù) is adopted for its phonetic resemblance of "溜" (Liū) in Chinese which is often used to praise someone's exceptional performance/ability or the person himself/herself. Below are the translation and interpretation of the comment:

66666666 终于 有 大神 了 Six six six six six six six finally there is big god (Chinese Particle) Figurative meaning: Awesome, finally there is an expert.

In this comment, "大神" (big god) is a stylized Chinese Mandarin used to describe a person, in this case the uploader, who is exceptionally skillful in certain areas. Instead of typing Chinese pinyin and selecting characters through the Chinese input system, the user typed "6" to show his/her appreciation of the video content. In this example, "6"s are used independent of the

sentence that followed, and multiple numerals were adopted for an intensifying effect. Moreover, "6" can be used as part of a sentence as well, demonstrated in the example below:

这些 好 6

These good six

Figurative meaning: There are really awesome.

In this example, the numeral "6" is used as an adjective, and is grammatically an integral part of the sentence. Except for adopting the phonetic feature of "6", Chinese users also exploit the graphic feature of this number to express admiration as well (see Figure 39 below).

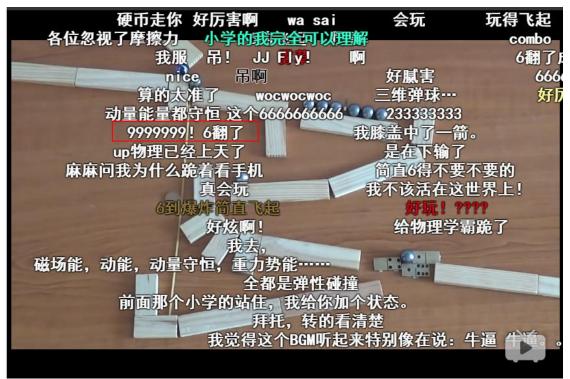


Figure 39. The graphic feature of "6" in a "bullet curtain" comment

The literal translation of the highlighted comment is "99999999! 6 is upside down (Chinese particle)". The user's intentional meaning is to express that he/she admired the video content that using regular "6" cannot fully describe the excitement; therefore, a "flipped over" (as in "翻了") version of "6", which is number "9", should be used. In Chinese Mandarin, "翻了" is often used

after an adjective for a purpose of intensification. In this example, the user combines the phonetic as well as graphic features of Arabic numeral "6" to playfully express his/her admiration of the video content with an intensified expression (see also Zhang, 2017).

In addition to the adoption of numerals for Chinese expressions, bilibili.com users were also found to use numerals for Japanese as well. Specifically, one stylized Arabic numeral, "543", is adopted for its phonetic features as the nick name of a popular Japanese guitar player (see Figure 40):

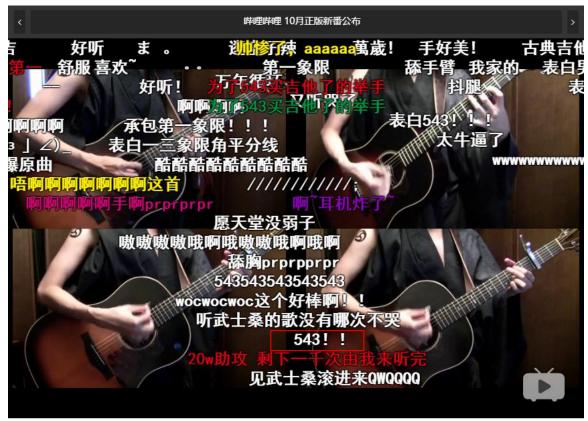


Figure 40. Using "543" for the nick name of a Japanese guitar player

In this example, the bilibili.com user was commenting on the performance of the Japanese guitar player, "おさむらいさん" (O Samurai San). The name means "Mr. Samurai" in English with an honorific "お" (O) as its prefix. In Chinese, "さむらい" (Samurai) is translated as 武士 (Wŭshi) which is phonetically similar to 5 (Wŭ) and 4 (Si) adopted by the user. The Japanese honorific for males, " $\stackrel{\diamond}{\rightarrow}$ $\stackrel{\circ}{\wedge}$ " (San), is also reflected by the numeral 3 (Sān) as a homophone. A total of 65 instances of this expression were found. This specific stylization was also identified by Zhang (2017) in his investigation of adoptions of Arabic numerals by Chinese online users.

Using Foreign Language Expressions in "Bullet Curtain" Comments

Foreign language expressions were also extensively adopted by bilibili.com users, with a total of 2,969 instances identified in the "bullet curtain" comments. Among these adoptions, English is the most frequently utilized with 2,489 instances, followed by Japanese with 480 instances. The following sections provide detailed analyses of these practices.

English Expressions

With 2,489 instances of usage, English is the most frequently adopted foreign language in "bullet curtain" comments. The users of bilibili.com adopt various English expressions, either individually or in combination with Chinese, in their comments. Like Weibo users, users of bilibili.com were also found to use English as the only linguistic code for a few comments. Similar to the findings of Weibo, this strategy is relatively less frequent, with only 30 cases observed. The highlighted comment in Figure 41 shows a typical example of a "bullet curtain" comments composed in a complete English sentence:



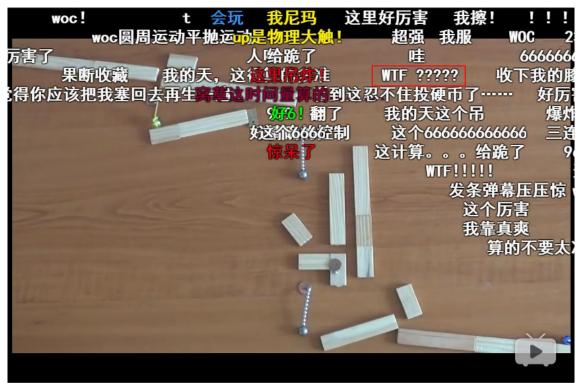
Figure 41. English only as a complete sentence in a "bullet curtain" comment: "I'm here"

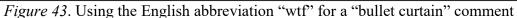
Besides using English sentences, individual words/phrases and abbreviations in English were also observed more frequently in bilibili.com. The highlighted examples in Figure 42 demonstrate the use of "cool" as an entire "bullet curtain" comment:



Figure 42. Using the English word "cool" for a "bullet curtain" comment

In the example, the word "cool" was adopted for its English meaning which shows the user's admiration of the video content. Here, the entire comment is composed of an English word. In the example of Figure 43, an English abbreviation "WTF" (what the fuck) followed by multiple question marks was adopted by the user to show his/her feeling of surprise.





While some English expressions, such as "cool" and "WTF" discussed above, are used to express the same meanings they have in English, a few other English expressions are used with new meanings when adopted by Chinese users. One of the most typical example of this practice is the change of the meaning in the word "up". The original meaning of "up" means the direction toward the sky or higher places. However, Chinese users use this word to mean the uploader of the video content. The highlighted comment in Figure 44 presents an example of this usage:

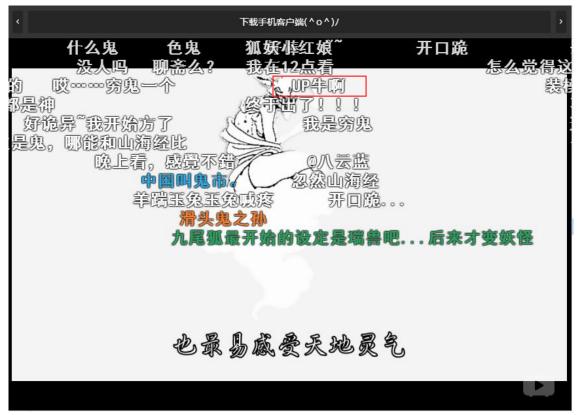


Figure 44. Using the English word "up" for the meaning of "the uploader of the video" in a "bullet curtain" comment

In this example, the user is expressing his/her admiration of the video uploader. The comment can be translated and interpreted as:

UP 牛 啊

Uploader cow (Chinese particle)

Figurative meaning: The uploader is great.

In this comment, the English word "up" is adopted for the meaning of "uploader", and

"牛" (cow) is used as an adjective which means someone or something as admirable in Chinese.

The meaning shift in "up" is likely to be related to the Chinese translation of "upload" - 上传

which literally means "up" and "transmit". The Chinese online users might have adopted part of

the Chinese translation and used "up" as in \pm to describe the owner or uploader of online

content. This example demonstrates how the meanings of English words can be shifted when used in a different sociolinguistic context.

On the other hand, the strategy of code-mixing was also adopted by bilibili.com users. Through code-mixing, expressions and features of English codes are mixed with other languages, most typically with Chinese Mandarin. The highlighted comment in Figure 45 below shows a typical example of English-Chinese code-mixing.



Figure 45. Using the English expression "BGM" with Chinese in a "bullet curtain" comment The sentence in the example above means "the background music is not bad". The expression "BGM" is in fact one of the most popular English expressions in bilibili.com (696 instances) which is the abbreviation for "background music". Since bilibili.com is a video-sharing website, many of the uploaded videos have background music. Viewers of these videos often ask the name of the video BGM. Instead of typing "背景音乐", which is the Chinese translation of background music, users often choose to type "BGM". In this comment, the English expression -"BGM" is mixed with the Chinese expression - "不错" (not bad) to form the comment.

In addition to the direct borrowing of English expressions in English-Chinese codemixing practices, some English expressions are meshed with Chinese to form creative new expressions. The highlighted example in Figure 46 shows how English can be combined with Chinese as a creative phrasal expression:

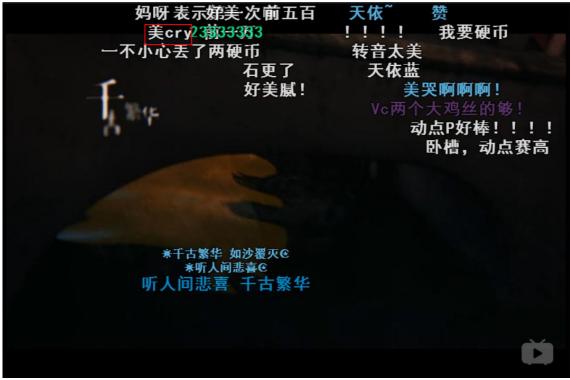


 Figure 46. Chinese-English code-mixing as "美 cry" in a "bullet curtain" comment

 In the comment, the user typed "美 cry" as Chinese-English code-mixing with the combination

 of the Chinese character "美" (beautiful) and the English word "cry". The meaning of this

 expression is to describe someone or something to be so beautiful that makes people want to cry.

 Bilibili.com users adopt this expression to show appreciations of beautiful and enjoyable online

 content such as songs, videos, and so on.

In addition, Chinese users also adopt the code-mixing strategy for playful effects as well. For instance, in Figure 47 below, the user adopts the code-mixing strategy for the expression "鼻 box" for a playful and humorous effect:



Figure 47. Code-mixing "鼻 box" instead of "b-boxing" for a playful and humorous effect in a "bullet curtain" comment

In the highlighted comments, the expression "鼻 box" is composed of a Chinese character "鼻" (Bí) which means "nose" and an English word "box". This expression is in fact a homophone of "b-boxing", which is an art form of vocal percussion produced through one's mouth, lips, tongue and voice that mimics music instruments such as drum machines. The contextual information behind the code-mixing usage is that the person featured in the video was sneezing, and his action was edited as repetitive scenes paired with rhythmic music for a funny effect. The user of the comment picked up the video content of sneezing and the features of "b-boxing". As a result, the expression "鼻 box" was created for the purposes of playfulness and humor. Finally, Chinese online users also create new English expressions based on the features of Chinese and English languages. In these creative English expressions, the morphemes of original English expressions are combined with Romanized Chinese. For instance, the English morpheme "-bility" can be adopted with Romanized Chinese to show people's abilities. One example of such literacy practices is using "niubility" to demonstrate admiration of someone's ability (see Figure 48):



Figure 48. Using a code-mixing expression "niubility" to show admiration of someone's ability The expression, "niubility", is in fact a combination of "niu" - the Romanization of Chinese character "+" (Niú) and the English morpheme "-bility". The literal meaning of the Chinese character means "cow", which is often adopted for an alternative meaning that describes someone or something as admirable. The expression "niubility" adopts the alternative meaning of "+" in combination with the English morpheme "-bility" to create the new meaning.

Japanese Expressions

With a total of 480 instances, Japanese expressions are occasionally observed in "bullet curtain" comments. Compared with Weibo in which no Japanese expressions were identified, this finding is not surprising as bilibili.com was originally a Japanese ACG (animations, comics and games) themed video-sharing website when it was founded in 2010. Although today, the website has 11 genres/categories of video sections such as documentaries, movies, and so forth, the Japanese ACG content still remains a popular genre for bilibili.com users. Due to the complexity of the Japanese writing system, features of Japanese Hiragana, Katakana, Kanji and Romanji were all found to be adopted by Chinese users.

Japanese Hiragana. As an important part of the writing system in Japanese, Hiragana is adopted by bilibili.com users. However, it is relatively difficult for Chinese users to type Japanese Hiragana without Japanese keyboard and/or typing software. Nevertheless, some "bullet curtain" users still choose to use Hiragana in their comments. The highlighted comment in Figure 49 shows an example of using Hiragana:



Figure 49. Using the Japanese Hiragana - "⑦" (marking of possession) in a "bullet curtain" comment

In the example above, the Japanese Hiragana " \mathcal{O} " (no), which is a particle used to mark possession, is used with " $\stackrel{*}{\not{}}$ " (god) to describe the BGM (background music) of the video. The comment can be understood as "god's background music", which shows the viewer's appreciation of the music in this video. As the Chinese character for god - " $\stackrel{*}{\not{}}$ " is the same in the form of the Japanese Kanji, it is unknown whether the user was using Chinese or Japanese for this specific expression. Nevertheless, the user demonstrates his/her knowledge of Japanese Hiragana by using " \mathcal{O} ". This comment also displays a typical example of multilingual codemixing which contains Chinese, Japanese, and English elements.

Japanese Romaji. As mentioned in the previous discussion, typing Japanese Hiragana can be challenging for Chinese online users due to restrictions of input choices of the keyboard and/or typing software. However, many users of bilibili.com are able to find an easier way to type Japanese expressions by using Japanese Romaji. Japanese Romaji is the Romanization writing system usually adopted by people who cannot read Japanese Kanji or Japanese Hiragana/Katagana. These Romaji expressions reflect the pronunciation of their correspondent Japanese expressions. The highlighted comment in the figure below shows how Romaji can be adopted by Chinese speakers:



Figure 50. Using Japanese Romaji in a "bullet curtain" comment

In this comment, the Romoji expression "sama" is used for the Japanese expression "様"(さま) as the Japanese honorific suffix for people of an older age or higher rank. The comment can be translated and interpreted as:

姐姐 sama 还能再 战 五百年!
Older sister sama (Japanese honorific suffix) can still fight five hundred years!
Figurative meaning: The older sister will still be adored in the long future.

The user combines the Chinese expression "姐姐" (older sister) with the Romaji of the Japanese honorific suffix "sama" to form a Japanese styled nomination for the older sister, which is one of the Japanese ACG characters featured in the video.

Japanese Kanji. Another way of using Japanese expressions is adopting the Japanese Kanji. Due to the historical and cultural connections between the Chinese and Japanese scripts, the alternation of Chinese characters known as Japanese Kanji is an important part of the modern Japanese writing system. For bilibili.com users, the close typographical ties between Chinese characters and Japanese Kanji offer an additional meaning making method for online communication. It was observed that bilibili.com users sometimes adopt the Japanese Kanji in their "bullet curtain" comments, as the example below demonstrates:



Figure 51. Using Japanese Kanji in a "bullet curtain" comment

In the highlighted comment in Figure 51, the Japanese Kanji "振付" (ふりつけ) is used. The English translation for "振付" is "choreography". The comment means "this choreography is

super awesome (kaomoji: 'stare')". The user was complimenting the choreography performed by the two dancers featured in the video. Although the Chinese characters of "振付" are the same as in Japanese Kanji, the meaning of "choreography" can only make sense in Japanese (i.e., the expression in terms of Chinese characters do not make sense).

Japanese expressions of lyrics and ACG content. Among all the Japanese features adopted by bilibili.com users, over half of these practices (265 instances) were used as users' repetitions of the lines or lyrics featured in videos. In other words, bilibili.com users often repeatedly type the same lines or lyrics from the videos as they watch. Figure 52 below shows a typical example of this practice:



Figure 52. Repeating the lines in the video in a "bullet curtain" comment

In this example, the user simply repeated the sentence, "ちょっと待って", produced by the dancer in the video as his/her comment. Similar repetitions of the lines and lyrics featured in the videos are the most frequently observed literacy practices with Japanese writings. It is likely that

bilibili.com users adopt these practices to demonstrate their involvement and participation of the videos they are watching and their knowledge of Japanese.

Using Foreign Language Transliterations in "Bullet Curtain" Comments

Another commonly adopted non-standard literacy practice type by bilibili.com users is foreign language transliteration, with a total of 2,958 instances. In this study, three languages -English, Japanese and Korean were adopted for transliterations. Users of bilibili.com construct these transliterations through phonetic similarities in sounds as well as script and graphic resemblance in writings.

Transliterations of English Expressions

Similar to the findings in Weibo, English is frequently transliterated into Chinese in "bullet curtain" comments. A total of 265 transliterations of English expressions were identified. In those practices, Chinese users adopt phonetic features of original English expressions, and transliterate them in Chinese characters that share similar sounds.

One of the most observed practices is the transliteration of the English word "interesting". Users of bilibili.com adopt a pattern of four-character combination to match the syllabic sounds of "interesting" as demonstrated in Figure 53:



Figure 53. Using Chinese transliterations for the word "interesting" in two "bullet curtain" comments

There are two highlighted comments in Figure 53 above. Both of these comments are examples of Chinese transliterations of the word "interesting":

因 (Yīn) 缺 (quē) 思 (sī) 婷 (tíng)

Cause lack think beauty (usually used as part of female Chinese names)

硬 (Yìng) 雀 (què) 湿 (shī) 挺 (tǐng)

Hard sparrow wet straighten

English: Interesting - /'int(a)rastiNG/

These two sets of four-character expressions are used for the same meaning of "interesting" and each character approximates the syllabic sound of the original English word despite of different meanings of individual characters. The inclusion of the non-stressed sound /s/ with the characters of 思 (sī) and 湿 (shī) may be resulted from the pronunciation habit of the consonant-vow structure in Chinese Mandarin. In addition, although different characters were selected for

transliterations, the pronunciations of the two sets of four-character expressions were adopted by other users as both present resemblance of similar syllabic sounds in the target English word.

While some English expressions are transliterated into Chinese with the original meanings, many transliterations used by Chinese users have been engineered with slightly different meanings. One example is the use of "嗨" (Hāi) for the English word "high" which originally describes the feelings and effects of drug use. However, the original meaning has shifted as the word is transliterated in Chinese. Figure 54 shows an example of the transliterated expression:



Figure 54. Using "嗨" for the English word "high" to exhibit excitement

In this comment, "嗨" is used as the phonetic transliteration for "high" in English. The comment can be translated and interpreted as:

嗨 起来

High get up

Figurative meaning: Let's get excited.

Different from the original meaning and connotations of "high" in English, the user adopts the transliterated expression to indicate that the music video makes him/her excited. This Chinese transliteration has little connection with using drugs, and has become a popular expression to describe excitement and happiness.

Besides individual words, transliterations of English phrasal expressions were also found in "bullet curtain" comments. For instance, the expression "go die" is often transliterated in Chinese as "狗带" (Gǒu dài) due to similar sounds. Figure 55 shows an example of using "狗带" in a comment:



Figure 55. Using "狗带" as the transliteration of "go die" in a "bullet curtain" comment The highlighted example can be translated as:

- 我 选择 狗带
- I choose dog bring

Figurative meaning: I choose to go die.

The phrase "go die" first appeared in a music rap performance of a famous singer Zitao Huang (黄子韬). During the performance, the pop-star came up with a code-mixed line as "我不会就这 样轻易地 go die" (I will not so easily go die). Due to the grammatical error of "go die" adopted in the song and the singer's popularity, this expression soon became viral online. Users of various social media start to adopt this expression as well as the Chinese phonetic transliteration "狗带" in online communication for a playful and humorous purposes. Instead of the literal meaning which means "to die", the expression is often used for the metaphorical meaning to describe something as intolerable.

The transliteration practices of English are often done to communicate in playful meanings. As Chinese users have many selections of character combinations that resemble the original sounds of English expressions, certain characters are chosen for humorous and/or "carnivalesque" (Bakhtin, 1984) effects. The example below shows a typical playful transliteration:



In the highlighted comment, the famous Marvel Comics superhero featured in the video, Tony Stark, was transliterated by a bilibili.com user as "屎大颗" (Shǐ dà kē) which is phonetically similar to the last name of the character. The literal meaning of "屎大颗" means "shit big chunk". The complete translation and interpretation of this comment are shown below as:

- 我 不认识 这个 屎大颗
- I don't recognize this shit big chunk

Figurative meaning: I don't recognize this Stark.

In this example, the user deliberately chooses a vulgar expression to transliterate "Stark" out of all the other possible choices of Chinese characters. In doing so, a humorous and "carnivalesque" effect is achieved.

Transliterations of Japanese Expressions

Bilibili.com users also frequently transliterate Japanese expressions into Chinese. A total of 2,669 instances of Chinese transliterations of Japanese were observed in the study. Similar to the findings of Weibo, Chinese users adopt both phonetic and script features of Japanese in their transliterations. In addition, due to the unique origin of bilibili.com with videos themed with Japanese ACG content, Japanese ACG and pop cultures are most often exploited for meaning making.

Transliterations of Japanese Kanji. The first type of transliterations of Japanese is the use of Chinese characters that resemble Japanese Kanji scripts. A total of 2,129 cases of this type of transliterations were identified in the study. The highlighted comment below includes a typical example:

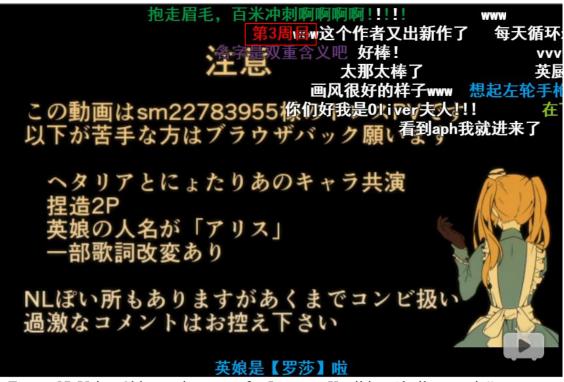


Figure 57. Using Chinese characters for Japanese Kanji in a "bullet curtain" comment

In this example, the Chinese characters "周目" are adopted for the Japanese Kanji expression "週目" (しゅうめ). The original meaning of "週目" is "time" as frequencies. As the Kanji in "週目" is similar to the Chinese characters "周目" (Zhōu mù), some users of bilibili.com and fans of Japanese ACG have adopted the Chinese characters for the Japanese expression. In this way, the comment in Figure 57 can be translated as follows:

第3 周目

The third week eye

Figurative meaning: The third time (of watching this video).

Japanese Kanji expressions of honorifics are also transliterated in Chinese characters. Bilibili.com users often use the Chinese character "君" (Jūn) for the Japanese Kanji "君" (くん)

which is used as an honorific suffix for males of younger age or lower rank in Japanese. Below is an example of how " \exists " ($\langle \lambda \rangle$) is used in the Chinese transliteration:



Figure 58. Using Chinese as the transliteration for the Japanese honorific suffix "君" ($\langle \lambda \rangle$) The highlighted expression "计数君" means "the person who counts". It was used here as the player featured in the first-person shooting video game was showing off his different types of guns. Some video viewers voluntarily start to count the numbers of different guns this player presented. In this example, the Chinese character "君" is adopted as it is written in the same way as the Japanese honorific suffix "君" ($\langle \lambda \rangle$).

In addition, many Chinese transliterations of Japanese Kanji expressions have origins in the animations and comics from Japanese ACG and pop cultures. One of the popular transliterations of this nature is the expression "前方高能预警" with a total of 223 instances. The example below shows how it is used in a "bullet curtain" comment:



Figure 59. Using "前方高能预警" in a "bullet curtain" comment

In this comment, a kaomoji of "hand wave" is adopted with the expression "前方高能预警".

The English translation of this expression is "warning that high-energy substances approaching

ahead". The original expression was believed to be adopted from the lines in the Japanese animation series, "機動戦士ガンダム (Mobile Suit Gundam)", which describes the detection of enemy aircraft and robots through the radar reading. The complete Japanese expression of "前方 高能反应" is "前方高エネルギー戦闘员は直ちに退避してください". In Chinese, it can be translated as "前方高能, 非战斗人员迅速撤离" which means "high energy substances approaching ahead, non-combat personnel should evacuate immediately". This expression is adopted by Chinese online users to signal that something exciting, surprising, strange and/or horrifying will appear in the video. In addition to the use of the complete expression, bilibili.com users frequently adopt the shorter versions such as "前方高能", "高能预警", or simply "高能" for the same meaning.

Transliterations of Japanese through Similar Sounds. Another type of transliteration practices of Japanese is the adoption of phonetic features. In other words, Chinese online users select certain combinations of Chinese characters that resemble the Japanese expressions with similar sounds. These phonetic transliterations include both Japanese expressions originally from Japan known as Hiragana, and Japanese transliterated expressions of foreign/borrowed languages known as Katakana. A total of 540 instances of this type of transliterations were identified.

The transliterations of Japanese Hiragara are frequently adopted by bilibili.com users. These expressions are usually transliterated for short phrases or markers for honorifics which are often observed in Japanese ACG content. The highlighted example in Figure 60 demonstrates the Chinese transliteration of " $\check{\sigma}$ \circlearrowright $\check{\sigma}$ " (Saikou) which is a Japanese phrase for "the best":

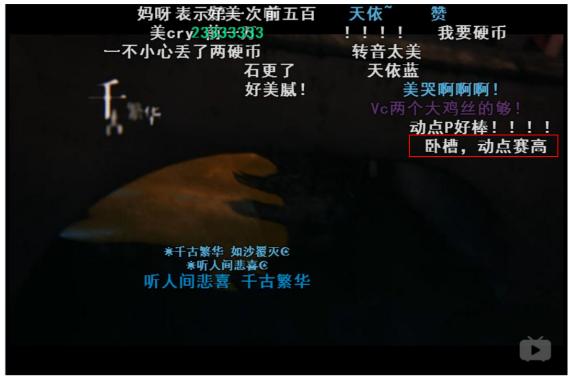


Figure 60. Using the phonetic transliteration for a Japanese expression in a "bullet curtain" comment

In this example, the Chinese characters "赛高" (Sài gāo) is used for the Japanese expression "さいこう" (Saikou) which means "the best" due to their similar sounds. The comment can be

translated and interpreted as:

卧槽, 动点 赛高

I fuck, Dongdian match high

Figurative meaning: My goodness, Dongdian is the best.

In this comment, "卧槽" (Wò cáo) is the non-standard Chinese character expression for "我肏" (Wǒ cào - I fuck), which is used to show excitement or surprise. Dongdian is the user name of the performer featured in the video. "赛高" is adopted as the phonetic Chinese transliteration of "さいこう" in Japanese which means "the best".

Besides words and phrases, bilibili.com users adopt features of Japanese honorifics in their comments similar to the findings of Weibo users in previous discussions. Two types of Japanese honorific suffixes were identified in the "bullet curtain" comments; they are " $\stackrel{*}{\circ}$ h" (San) with 115 instances and " $\stackrel{*}{\circ} h$ " (Chan) with 110 instances. The example below shows how " $\stackrel{*}{\circ} h$ " is used in the Chinese transliteration as " $\stackrel{*}{\approx}$ ":



Figure 61. Using "桑" as the Chinese transliteration for the Japanese honorific suffix "さん"

In the highlighted comment, the featured Japanese guitarist in the video, "おさむらいさん" (O Samurai San), is translated and transliterated in Chinese as "武士秦". This celebrity is the same person who is also nicknamed as "543" discussed previously in Figure 40 (p.120). The sentence can be translated and interpreted as:

啊啊啊啊 武士 桑

Ah ah ah ah Samurai San

Figurative meaning: Ah ah ah ah, O Samurai San.

In this comment, the user translated the Japanese word "侍" (Samurai) in Chinese as "武士", but kept the Japanese honorific suffix "さん" (San) which was transliterated in Chinese as "桑" (Sāng) due to similar pronunciations.

There are also cases in which Katakana Japanese expressions (i.e., the foreign/borrowed expressions in Japanese from other languages) are transliterated into Chinese. Instead of using the original foreign expressions, Chinese users adopt the Japanese pronunciation in their transliterations. The example below shows a typical example of such practices:



In the highlighted comment, the user typed "胖次" (Pàng cì) for the Japanese Katakana "パン

 \mathcal{V} " (Pantsu). Below are the translation and interpretation of this comment:

白色 胖次

White fat time

Figurative meaning: White underwear.

The Katakana expression was originally borrowed from the English word "pants"; however, Japanese speakers refer "パンツ" (Pantsu) specifically to underwear. Although the original English word "pants" is phonetically similar to "胖次" (Pàng cì), it is not the English word that was transliterated in this comment as the user was referring to the white underwear of the animation character in the video. In other words, the Japanese Katakana "パンツ" (Pantsu) was transliterated in this comment. It is also worth noticing that the pronunciation of "パンツ" (Pantsu) is also more similar to the Chinese expression "胖次" (Pàng cì) than the original English word "pants".

Finally, Romanized letters were also found in the transliteration practices of Japanese expressions. Specifically, one expression, "pr", was identified with 60 instances of usage. Some bilibili.com users adopt the expression of "pr" to resemble the Japanese onomatopoeic expression - " $^{\sim} \square$ " (pero) which is used to mimic the sound of licking. The highlighted comment in Figure 63 shows how this transliteration is used:



Figure 63. Using Romanized expression "pr" for the Japanese onomatopoeic expression " $^{\Box}$ " to mimic the sound of licking

In the highlighted comment, the Japanese expression "ペロペロ" (peropero) is transliterated in Romanized letters as "prpr" for the sound and action of licking. Combined with the rest of this comment - "白色胖次" (white underwear), the user demonstrates his/her willingness to lick the white underwear of the featured animation character. Again, a "carnivalesque" orientation of communication is adopted here.

Transliterations of Korean Expressions

Some Korean expressions were also transliterated in "bullet curtain" comments with a total of 24 instances. Similar to the findings in Weibo, the transliterations of Korean expressions are limited to "오빠" (Oppa), which means older brothers or trusted men used by females, and "는" (Wuli), which means "my" or "our" used by fans as endearment toward their idols. Chinese users of bilibili.com adopt the same transliterations in Chinese and Romanized letters as "欧巴"

(Ōu bā) and "wuli" for the same meanings and functions observed in Weibo. That is, these two expressions are adopted to nominate celebrities, especially Korean idols, to show admiration.

Using Non-standard Chinese Character Expressions in "Bullet Curtain" Comments

Literacy practices in bilibili.com are often creative and do not necessarily follow the standard written forms, and online users frequently adopt non-standard Chinese character expressions in "bullet curtain" comments. These practices are often adopted for the convenience of the Chinese character input system and/or for a creative and playful purpose. Non-standard Chinese character expressions are among the commonly adopted literacy practices found on bilibili.com with a total of 2,260 instances. Bilibili.com users substitute the characters in the original Chinese expressions with their choices of other characters with similar sounds.

One of the most commonly adopted expressions of this practice type is the non-standard Chinese character expression - "我肏", a derogatory term in Mandarin Chinese to express various emotions such as anger, disappointment, surprise, or excitement. The literal meaning of this expression means "I fuck" as seen in Figure 60 (p. 145). Users of bilibili.com often use other characters as homophones to convey the same meaning. The most commonly adopted character substitution for "我肏" is "卧槽". Figure 64 below demonstrates a typical example of using "卧 槽" in a "bullet curtain" comment:



Figure 64. Using "卧槽" (Wò cáo) to substitute "我肏" (Wǒ cào) in a "bullet curtain" comment The expression of "卧槽" (Wò cáo) literally means "lying in a ditch". This expression is adopted mainly due to its resemblance of sounds with "我肏" (Wǒ cào) and the convenience of typing as "卧槽" is usually the first phrasal expression when "wocao" is typed in the Chinese pinyin software. In fact, among the 969 observations of the "I fuck" expressions, no instances of the original form as "我肏" were identified. Besides "卧槽", other character combinations with similar sounds in pinyin were also adopted, such as "我擦" (Wǒ cā) and "雾草" (Wù cǎo). The table below exhibits the distribution of different variations of "我肏" observed in "bullet curtain" comments:

Variations of 我肏 (Wǒ cào)	Count
卧槽 (Wò cáo)	759
我擦 (Wǒ cā)	61
雾草 (Wù cǎo)	28

Table 9. Different character combinations for "我肏"

Table 9 (Continued)	
Variations of 我肏 (Wǒ cào)	Count
握草 (Wò cǎo)	19
我凑 (Wǒ còu)	10
草 (Cǎo)	9
我曹 (Wǒ cáo)	8
窝草 (Wō cǎo)	6
哦草 (Ó cǎo)	2
沃草 (Wò cǎo)	1
舞草 (Wǔ cǎo)	1
哦槽 (Ó cáo)	1
我撤 (Wǒ chè)	1

All of the substitutions share homophonetic similarities with the original expression. The use of these character combinations may help avoid potential online language censorship as well. Furthermore, these expressions reflect the idea of "social steganography" (i.e., concealed writing) as a privacy strategy which can be "used in CMC spaces to camouflage information in public view, creating a message that can be read in one way by those who have the inferential capacity to understand the codes and read differently by those who cannot" (Georgalou, 2016, p. 49).

Some non-standard Chinese character expressions were adopted for an effect of demonstrating "cuteness". In these expressions, homophonetic characters are chosen for the original phrases; however, the substitute characters are often not the exact homophonetic representations of the original phrase, and online users adopt this strategy to resemble baby talks or people with accents. In this way, the online users project an image of cuteness or clumsiness. The highlighted comment in Figure 65 presents a typical example of using non-standard Chinese character expression for this purpose:



Figure 65. Using non-standard Chinese character expressions for "cuteness" in a "bullet curtain" comment

In the highlighted comment, "蓝孩纸" is used for the original Chinese expression "男孩子" which means "boy". In the original Chinese expression, the character "男" means "man/male and "孩子" means "child". The translations below show how the original Chinese characters are substituted:

蓝 孩 纸 Blue child paper

Figurative meaning: A boy.

In the non-standard Chinese character expression, "蓝" (Lán) is used to substitute "男" (Nán) and "纸" (Zhǐ) is used to substitute "子" (Zi) due to the similarities in pronunciation. The purpose of this type of non-standard Chinese character expressions is not for the convenience of typing or avoidance of online censorship. Rather, the online users were attempting to establish a sense and image of "cuteness", by mimicking accented speech. It is also possible that these practices may be adopted to resemble baby talks which are often deviated from standard Chinese Mandarin pronunciation.

Non-standard Chinese character expressions have also been adopted for other playful purposes. Users of bilibili.com frequently play with Chinese characters of various expressions to make fun of online content or celebrities. For instance, the President of the United States - Barack Obama is often the target of such playful literacy practices (see Figure 66).



Figure 66. Using a non-standard Chinese character expression "奥九马" for President Barack Obama in a "bullet curtain" comment

In Figure 66, the video features Barack Obama Photoshopped as a warrior of the Chinese Army during World War Two. In the video, President Obama was dressed in the Chinese Army uniform with a grenade in his hand. The video was made to suggest that Barack Obama has issued pro-socialist policies during his term. However, the Chinese translation of "Obama" as "奧巴马" (Àobāmǎ) was changed to "奧九马" (Àojiǔmǎ). In the official translation "奧巴马",

"巴" (Bā) in Chinese is pronounced in the same way as "八" (Bā) which is the Chinese character for Arabic number 8. The user playfully adopted this phonetically similarity, and used the Arabic number 9 to substitute "巴" which is a homophone of Arabic number 8 in Chinese. Another playful expression of "奧巴马" was also observed in the same video (see Figure 67 below):



Figure 67. Using a non-standard Chinese character expression "奥巴鸡" for President Barack Obama in a "bullet curtain" comment

In the video, through Photoshop President Barack Obama appears dressed in a traditional style of Chinese workers while driving a farming truck. In the highlighted comment, "奥巴马" (Àobāmǎ) is changed to "奥巴鸡" (Àobājī). In Chinese, the character "马" used in the translation of the president's name also means "horse". The user played with this meaning and changed it into another animal "鸡" which means "chicken" for a playful effect.

Using Kaomojis in "Bullet Curtain" Comments

In contrast to Weibo in which emojis are the main source of paralinguistic information used to signal affect - most often in conjunction with linguistic codes, kaomojis are the most frequently adopted non-linguistic literacy practices in "bullet curtain" comments with 2,249 observed uses. Kaomoji, or "颜文字" in Japanese Kanji, literally means "face (颜) character (文 字)". It is a popular Japanese emoticon system created with Japanese typing system of characters and punctuation, and is even codified into Japanese dictionaries (Nishimura, 2007). It has also been frequently used in other communication platforms, such as instant messaging, in other Asian regions (Lee, 2017). Unlike the western emoticons which are typed through the singlebyte system, kaomojis are typed through double-byte system and a wide range of characters. Kaomojis are also unique as these expressions are presented in a horizontal manner (e.g., (*^ ω ^) for happy) instead of vertical (e.g., :-) for happy). The example below shows two typical comments with kaomojis:

貌似被up主骗了QAQ 果果果	紫白花 求bgm		老婆们,你 被骗了 参	们怎么在这 ∉ 爹见教主 呐
	污	н	小点	岛是我的 污 BGM是什么
	见教主! 地方继续吸	hhhhhhh	。 什么 条都是被封证	情况?
	有毒。。。		放开我	。我还能吸! 谜之3D
a start	2	* 33333 编进来的	,吃吃	
and a second	192 + 1 11 -	根本停不	下来	药我我
			、禁啊~(̄`	
	A REAL	¥手举	手举手举手	的点了进来, 举手举手举手
				的时候我来了 ギリギリ舞!
	从零开始的异t	世界生活		

Figure 68. Using kaomojis in two "bullet curtain" comments

The two highlighted comments in Figure 68 include kaomojis at the end of the texts to demonstrate the users' emotions. Different from the western emoticons, these kaomojis are read horizontally with double-byte sets of Chinese characters. The top highlighted comment can be translated and interpreted as:

Seems (Chinese particle) up owner (uploader) tricked (Chinese particle) QAQ Figurative meaning: It seems that I am tricked by the uploader QAQ.

In this example, the kaomoji only contains Romanized letters. Nevertheless, it should be read in a horizontal way. The kaomoji - "QAQ" implies the user's emotion as "being wronged with tears in the eyes" which complements the textual information in the comment. The bottom highlighted comment can be translated and interpreted as:

~(~~~)~

In this comment, the kaomoji " $\sim (\overline{\ } \nabla^{--} \sim)$ " of the textual content presents a happy or enjoyable emotion. Although the literal translation of kaomoji - "颜文字" means "face character", many kaomojis also display other parts of a human body for expressive emotions and/or actions. For instance, in the example of " $\sim (\overline{\ } \nabla^{--} \sim)$ ", the signs of " \sim " are adopted to imitate the arms of a person waving. In some creative kaomojis observed in bilibili.com, objects are also featured in the expressions, such as " $(\checkmark \ \Box') \checkmark (\neg^{-----})$ " which describes the action of an angry person flipping a table. Besides emotions and actions of humans, kaomojis can also exhibit images of animals. Many kaomojis were created to present images of cute and furry animals such as cats, dogs, bears, etc. The highlighted example in Figure 69 below shows a kaomoji for the face of a cat:



Figure 69. Using a kaomoji to resemble the face of a cat in a "bullet curtain" comment

The comment means "support" (支持) with a cat face kaomoji. It is likely that the user adopts the animal kaomoji to display cuteness.

Furthermore, kaomojis can also be used individually in a "bullet curtain" comment with no other textual content. In other words, users can express his/her ideas through only kaomojis. The highlighted comment below shows a typical example of such usage:



Figure 70. Using only a kaomoji in a "bullet curtain" comment

In this example, the kaomoji "QAQ", meaning "being wronged with tears in the eyes", is the only meaning making sign in the comment. Although there is no other text, the kaomoji alone expresses the user's feeling as shocked and surprised.

Using Romanized Chinese in "Bullet Curtain" Comments

Romanized Chinese is another frequently adopted non-standard type of literacy practice in bilibili.com. In this style of literacy practice, Chinese users adopt full pinyin expressions and/or pinyin initials - individually or in combination with Chinese characters - in their messages. An array of expressions have been created and practiced as conventions for expressions such as euphemisms for swear and/or sex-related words/phrases. A total of 702 instances of Romanized Chinese were observed in "bullet curtain" comments.

Using Chinese Pinyin Initials

Chinese pinyin initials are often adopted by bilibili.com users to substitute characters. This strategy is often used for expressions of swear words/phrases. The highlighted example below demonstrates how a swear phrase "他妈" (Tā mā) is replaced with pinyin initials - "TM":



Figure 71. "TM" for Chinese swear phrase "他妈" (Tā mā) in a "bullet curtain" comment The comment in the example can be translated and interpreted as:

这 TM 怎么 可能 是 在地上 做的 *This TM (his mother) how could (it) be on the ground done* Figurative meaning: *How is it possible to be done on the ground?*

The expression "TM" is composed of the pinyin initials of "他妈" (Tā mā), which literally means "his mother". The original expression is a frequently used Chinese swear phrase to show strong emotions such as surprise and anger. Pinyin initials are adopted for swear words/phrases not only for the convenience in typing, but also for avoiding online censorship for expletives.

The same purpose can also be applied to other taboo expressions, such as sexual organs of human bodies. For instance, users adopt "jj" as the euphemism for "鸡鸡" (Jī jī - chicken chicken) which is a Chinese colloquial for a man's sexual organ.

Chinese pinyin initials can also be used with Chinese characters. The highlighted comment in Figure 72 shows how "懵 b" (Měng b) is used for the expression "懵逼" (Měng bī):



Figure 72. Using a Chinese initial with characters in a "bullet curtain" comment In the highlighted comment, the pinyin initial "b" is used in combination with the character "懵" to replace the expression "懵逼". The message can be interpreted as "the girl is shocked... 233 (laughter)". The expression "懵逼" is originally used as a dialectal expression from the north part of China that describes the status of being surprised or shocked. The character "逼" (bī) is often adopted as a euphemism and homophone for "屄" (bī) which literally means a woman's

sexual organ. As "逼" is often used with the euphemistic meaning, many online users also adopt the pinyin initial "b" to substitute "逼" as well.

Using Complete Chinese Pinyin Expressions

Besides pinyin initials, complete spellings of pinyin were also observed in "bullet curtain" comments. Although the Romanized keyboards do not provide input facilitation for tones in standard Mandarin Chinese pinyin, users are able to make meanings with combinations of Romanized letters with no tonal markings. An example is presented in the figure below:



Figure 73. Using a complete Chinese pinyin expression in a "bullet curtain" comment In this example, the pinyin "qiang" is adopted for the Chinese character "枪" (Qiāng) which means "guns". The comment can be translated as "keeps repairing guns". The video itself is featured with a first-person shooting game, and the uploader was showing off how many different types of guns he/she owns. Although the Romanized Chinese pinyin expression potentially has many possible correspondent characters, within this context it is not difficult to

interpret that "qiang" is meant for "guns" despite of no tonal markings. However, the motivation of the practice is uncertain, as the user might have either purposefully adopted Romanized letters for convenience, or typed as pinyin by mistake. Nevertheless, the meaning of the pinyin expression as well as the entire comment are comprehensible.

Pinyin expressions can also be adopted for a clearer purpose. That is, pinyin as an alternative for Chinese character expression is often adopted to avoid online censorship. The highlighted comment in Figure 74 below demonstrates how this purpose is achieved:



Figure 74. Using pinyin as an alternative for censored character expressions

In the example, the user was commenting on the actions of three pandas playing with each other, and indicated that their actions resemble sexual activity. The comment can be translated and interpreted as follows:

5 分钟 高清 无码 MAO 片

Five minute high-quality no-mosaic MAO video

Figurative meaning: Five-minute high-quality no-mosaic porn video.

The expression, "MAO 片", is in fact a Chinese pinyin-character code-mixing. The original expression is "毛片" (Máopiàn). The literal meaning of the phrase means "hair video", but it is used as a stylized Chinese Mandarin expression for pornography. The user adopts the pinyin version of "毛" to form "MAO 片" as the euphemism of the original phrase. Interestingly, the expression "毛片" is already a term used to avoid censorship for adult content, and it is not censored in bilibili.com. In this way, the user demonstrates his/her understanding of the original euphemistic expression (i.e., "毛片" in Chinese characters) while presenting his/her own idiosyncratic and playful stylization for decorative writing with pinyin.

Using Combinations of Chinese Pinyin Initials and Complete Pinyin Expressions

Users of bilibili.com combine Chinese pinyin initials with complete pinyin expressions as well. As words and phrases are often composed of two or more characters in Chinese, it is possible to use Chinese pinyin initials and complete pinyin expressions together in one word/phrase. In the study, one typical expression of this nature was already identified, which is the use of "woc" for "我肏" (Wŏ cào).

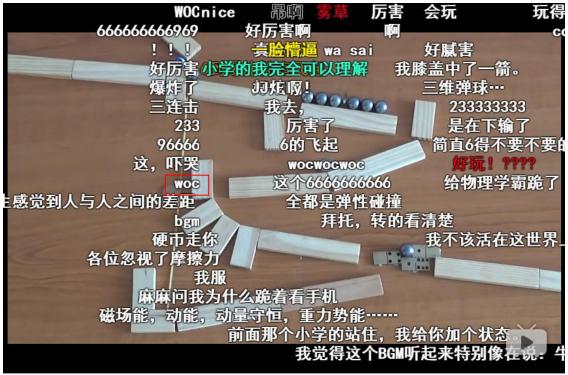


Figure 75. Using Chinese pinyin initials and complete pinyin expressions as "woc"

The highlighted comment in Figure 75 above is the mixed-pinyin expression for the Chinese phrase "我肏" which literally means "I fuck". The phrase is often used for strong emotions such as feelings of surprise and anger. The original pinyin for the phrase is "Wǒ cào". The user adopts the complete pinyin spelling of "Wǒ" without the tonal marking and the pinyin initial for "Cào" to form the expression "woc", which functions as an abbreviation. This expression has also been used for playful effect by other bilibili.com users (see Figure 76).

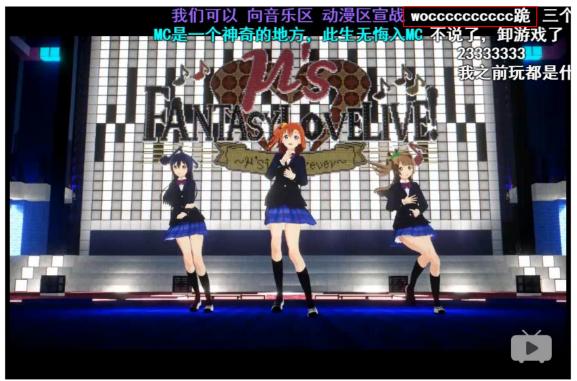


Figure 76. Using a variation of "woc" in a "bullet curtain" comment

In the highlighted comment, "woc" is used with repetitions of the letter "c". The user adopts this variation of "woc" to show his/her admiration of the video. Here, the multiple "c"s project a more intensified feeling, which is similar to the use of multiple "3"s for "233" as laughter discussed previously.

Using Emojis in "Bullet Curtain" Comments

Use of emojis were also observed in "bullet curtain" comments from bilibili.com. With a total of 527 instances of this literacy practice type, emojis are not adopted as frequently as kaomojis (2,249 instances). In the sections below, I analyze several communicative functions of using emojis in "bullet curtain" comments.

Using Emojis to Express Emotions

Conventionally, emojis are used online to express emotions and convey feelings. Users of bilibili.com have adopted these conventional functions of emojis as well. The example below shows the use of a stack of laughter emojis in a "bullet curtain" comment:

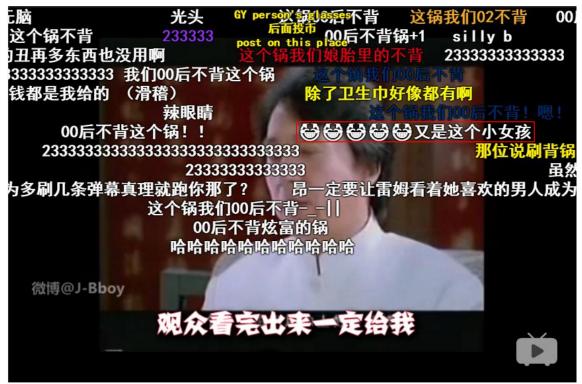


Figure 77. Using laughter emojis in a "bullet curtain" comment

The highlighted comment in Figure 77 can be translated as "(emojis: laughter) it's this girl again". The video was made to mock a girl who became famous online by showing off her fashion collections. The user of the sample comment suggested that this is not the first time he/she saw the girl ridiculed in a featured video. The emojis of laughter were adopted to show the user's emotion toward the girl mocked in the video.

Using Emojis to Mark Specialized Texts

Emojis can also be used to mark specialized texts in "bullet curtain" comments. These texts are usually lines from movies and videos, or lyrics of songs. In order to distinguish these

texts from the other "bullet curtain" comments, emojis are adopted as differentiation markers. The highlighted example below shows a "bullet curtain" comment marked with emojis for lyrics (see Figure 78):

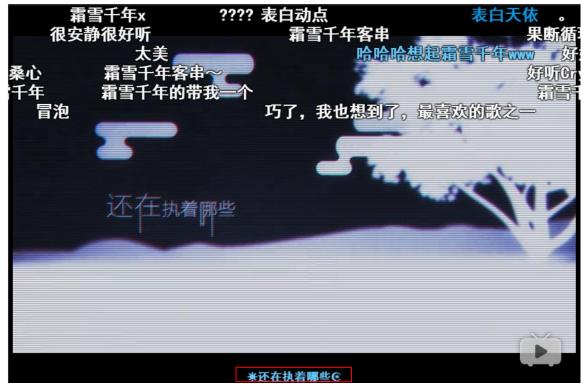


Figure 78. Using emojis as markers for lyrics in a "bullet curtain" comment

In the highlighted comment, the texts are in fact the lyrics of the song featured in the video. The actual lyrics "还在执着哪些" are also displayed in the video's screenshot as well. This comment is differentiated from other "bullet curtain" comments with the use of emojis "*" and "C*".

Using Deictic Emojis to Direct Conversations

Emojis are also used as signs to direct conversations. Different from Weibo and online discussion forums which are designed for "floor-building" conversations, the "bullet curtain" system do not provide structural spaces for turn-by-turn asynchronous conversations for its users. Therefore, it is up to the users of bilibili.com to determine how they can reply to other users' "bullet curtain" comments over the ongoing video. One of the strategies observed in the study is the adoption of deictic emojis, such as "↑", to direct conversations. The following sections discuss how deictic emojis are used to facilitate conversations through "bullet curtain" comments.

Firstly, a deictic emoji can be applied to pinpoint and correct/edit one's own messages. For instance, in the highlighted sentences in Figure 79 below, the user adopts an upward deictic emoji "↑" to direct his comment - "更正↑我只记得她最爱笑" (bottom highlighted sentence) to his/her previous sentence - "我只记得她最爱我" (top highlighted sentence).



Figure 79. Using a deictic emoji "[↑]" to pinpoint one's previous comment

The user was trying to make a correction for the top highlighted sentence posted earlier. Here is the comparison of two highlighted sentences:

我只记得她最爱我

I only remember that she likes me the most

更正↑我只记得她最爱笑

Correction \uparrow I only remember that she likes to smile the most

In the bottom highlighted sentence, the upward deictic emoji was adopted to show a clearer connection between comments. Due to the lack of structural editing system through "bullet curtain" comments, this type of emojis provide a convenient method for bilibili.com users to provide editing or clarifications of their comments.

The same type of emojis can also be used to pinpoint the video content as well. In the highlighted example of Figure 80, a deictic emoji " \checkmark " was adopted by the user to point to the character featured in the video (the creature on the left).



Figure 80. Using a deictic emoji to pinpoint the video content

The comment in Figure 80 can be translated as follows:

✓我看到 了 什么,小 **
✓I saw (Chinese particle) what, little **

Figurative meaning: ~ What did I see? A little **.

The symbol "**" was adopted as a symbolic euphemism for a man's sexual organ. The deictic emoji was used here in order to point to the creature on the left of the video.

Finally, deictic emojis can be used as markers of replies among different users. As the comments through the "bullet curtain" system are constantly in motion and only appear within a short time frame, it is especially challenging for users to reply to each others' comments. One solution is to use the deictic emojis as markers for replies. The comments highlighted in Figure 81 below demonstrate how real-time conversations can be managed with a deictic emoji:



Figure 81. Using a deictic emoji as a marker of a reply to another user's comment

In Figure 81, the highlighted comment to the right in blue is a response to the highlighted comment to the left in white. The two users were commenting on the song which was modified and performed by the singer who made the video. The comment to the left means "(I) still feel that the original (version of the song) is better", while the comment to the right as a reply is in fact a question which means "↓is this not the original version?!" In this example, although the

two comments were not aligned perfectly, they still construct a dialogue due to the content of these comments as well as the use of a deictic emoji " \downarrow ". Despite of the imperfect alignment of the dialogue, it is observable that the comment to the right is positioned higher than the one to the left which justifies the use of a downward deictic emoji " \downarrow " as a marker for the reply.

Using Stylized Dialect-Accented Chinese

Besides Chinese Mandarin, stylized Chinese dialectal features are also adopted by bilibili.com users. As a multi-dialectical nation, China is home to various spoken dialects, which are often unintelligible to one another. Some of these dialects were also reflected in "bullet curtain" comments. With a total of 476 instances of stylized dialect-accented Chinese expressions, using features of spoken dialects is not uncommon on bilibili.com. The following sections provide several examples of how Chinese online users construct their comments with features of Chinese regional dialects.

The first type of stylized dialect-accented Chinese is constructed with features from collective groups of regional dialects. For instance, the adoption of northern Chinese dialect is often practiced by bilibili.com users. Figure 82 shows a typical example of using the northern dialectal expression "FF" in a "bullet curtain" comment:



Figure 82. Using the northern Chinese dialectal expression "咋" in a "bullet curtain" comment In the highlighted comment, "咋" (Zǎ) is used as a northern dialect for "怎么" (Zěnme) in Chinese Mandarin for the meaning of "why". The comment "你咋不上天" can be interpreted as:

Why don't you go up to the sky

"上天" (go up to the sky) is a stylized Chinese Mandarin expression which means someone is exceptionally good at something. Using this expression, the user also demonstrates his/her admiration of the person. The dialectal expression "咋" adopted in the sample comment is used by most regions in the northern part of China, such as Liaoning and Heilongjiang provinces.

Dialects of more specific regions have also been adopted by bilibili.com users. These dialectal expressions reflect relatively smaller regions compared to the previous type. The highlighted comment below includes a dialectal expression from Beijing and its surrounding areas (see Figure 83).

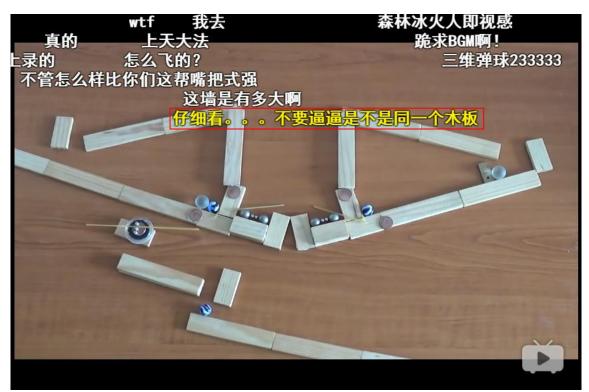


Figure 83. Using the Beijing dialectal expression "逼逼" in a "bullet curtain" comment In this example, the expression "逼逼" (Bī bī) is used as the stylized dialect-accented Chinese for the spoken dialect from Beijing and its surrounding areas. The meaning of the expression is to describe a person who talks and/or complains too much. The comment "仔细看。。。不要逼逼 是不是同一个木板" can be translated as "look carefully... do not talk too much about whether it is the same wood board". Although the Chinese character "逼" is adopted, there is in fact no official written form for this dialectal expression. Some users also adopt the Romanized letters "bb" as an acronym expression for "逼逼" (Bī bī).

Besides using expression from the northern dialectal family, Cantonese dialectal expressions were also observed in "bullet curtain" comments. For instance, in the highlighted comment in Figure 84, the user adopts the Cantonese expression "扑街" in his/her comment:

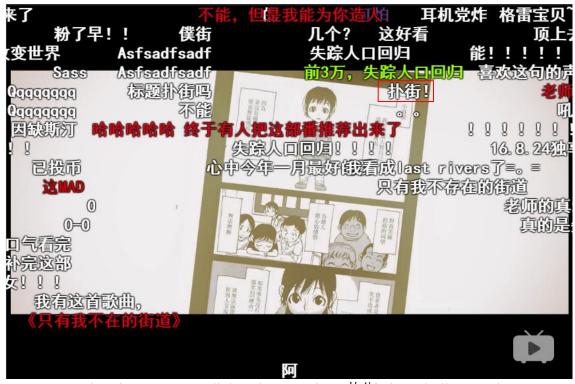


Figure 84. Using the Cantonese dialectal expression "扑街" in a "bullet curtain" comment In the comment, "扑街" (Pū jiē) is in fact the stylized dialect-accented Chinese for the Cantonese expression "仆街" (Puk Gai). The original meaning of this Cantonese phrase means a person dies or is killed on the street. Nowadays, this expression is often used as an expletive word. In this example, the stylized dialect-accented Chinese is used for its original literal meaning as the user was describing the death of the character featured in the video.

Users of bilibili.com also adopt stylized dialect-accented Chinese for playful effects as well. The highlighted comment in the example below shows how the name of an animation character is represented through a Cantonese expression (see Figure 85).



Figure 85. Using the Cantonese dialectal expression for the name of an animation character in a "bullet curtain" comment

In the highlighted example, the comment "丢你雷姆" (Diū nǐ léi mǔ) is a combination of "丢你"

(Diū nǐ; meaning: throw you) and the name of an animation character "雷姆" (Léi mǔ). The

expression is used as a homophone of "屌你老母" (Cantonese pronunciation: Diu Nei Lou Mou;

Mandarin pronunciation: Diǎo nǐ lǎo mǔ) which is a frequently used expletive word in Cantonese.

The user adopts the features of the original Cantonese expletive word and playfully constructs

the comment using the name of an animation character.

Using Orthographic Representations of Paralinguistic Features in "Bullet Curtain"

Comments

Orthographic representations of paralinguistic features are another literacy practice type observed in "bullet curtain" comments. A total of 394 instances were identified in the study.

One of the most frequently adopted practices as orthographic representations of paralinguistic features is the use of repeated letters of "h" to express laughter. The highlighted example in Figure 86 below demonstrates this function:

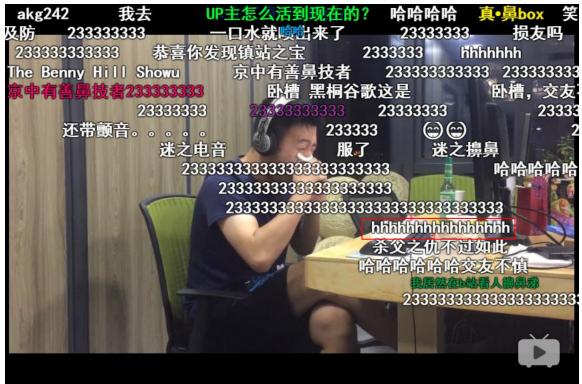


Figure 86. Using "h" to express laughter in a "bullet curtain" comment

In the highlighted example, the Romanized letter "h" is adopted for laughter as it is the pinyin initial of " \Pr_{Π} " (Hā) which is used as the sound of laughter in Mandarin Chinese. The user deploys multiple "h"s to present an elongated and/or intensified laughter.

Bilibili.com users also adopt Japanese expressions to form orthographic representations of paralinguistic features. One example is using "w" or multiple "w"s to express laughter (see Figure 87).



Figure 87. Using "w" to express laughter in two "bullet curtain" comments

In the two highlighted examples, the Romanized letter "w" is used to express laughter. The meanings of these comments are "天依 w" - "Tianyi (the singer featured in the video) w" for the comment on the left, and "好听 wwww" - "sounds good wwww" for the comment on the right. This usage is borrowed from the Japanese word for laughter "笑う" (warau), and Japanese online users often adopt "w" or a set of repeated "w"s as expressions of laughter. This practice is adopted by Chinese online users on bilibili.com, which is likely from the influence of Japanese culture of the website.

Using Traditional Chinese Characters in "Bullet Curtain" Comments

Although the users of bilibili.com overwhelmingly adopt simplified Chinese characters in their comments, traditional Chinese characters were also observed in the study. Currently, mainland Chinese people use simplified characters whereas traditional Chinese characters are mainly used in Guangdong of mainland China, Hong Kong, Taiwan and some Chinese communities overseas. In this study, a total of 196 instances of using traditional Chinese

针师求嫁 上殿堂 6 娇无1 **1 300** 天依! -天依蓝 ≦) **66CCFF**? 动点! 1 動畫比歌成本高 QUQ 天依我媳妇 天依蓝 pora太太 我要承包依儿 試色 好美 剑吧! 各位・ 天依聲音好美! 画质感 2333 了!!

characters were identified. The comment highlighted in Figure 88 below is an example:

Figure 88. Using traditional Chinese characters in a "bullet curtain" comment

In this example, traditional Chinese characters are adopted. I provide the original comment in traditional Chinese and the same text in simplified Chinese for comparison below:

Traditional: 動畫比歌成本高

Simplified: 动画比歌成本高

It is unknown if the user is from the regions mentioned above. It is also possible that a user from mainland China may choose to adopt traditional Chinese to show his/her understanding of traditional Chinese writing or value of traditional Chinese culture.

Using Manually Typed Emojis in "Bullet Curtain" Comments

While emojis are usually composed of graphics and/or animations, users of bilibili.com

also use textual representations of certain emojis. For instance, the emoji "😇" (doge) were

observed to be presented as "[doge]", which is the textual explanation of the original emoji plus parentheses, in "bullet curtain" comments. A total of 77 instances of this type of literacy practice type were identified.



Figure 89. Using a manually typed emoji to express a facial expression in a "bullet curtain" comment

The highlighted comment in Figure 89 above adopts a manually typed emoji "(笑)" to describe the user's facial expression. The meaning of "笑" is "laugh/laughter", and is adopted as a manually type emoji at the end of the video, which means "the show is over". The user typed the Chinese character with parentheses as the textual representation of laughter. This is a deliberate choice by some users to type out the name or label of an emoji. These expressions always occur with some forms of parentheses (e.g., "()", "[]", or "{}") that include the names/labels of emojis.

Manually typed emojis can also describe more complex expressions and/or actions. The highlighted comment in Figure 90 below include a manually typed emoji that describes an action.

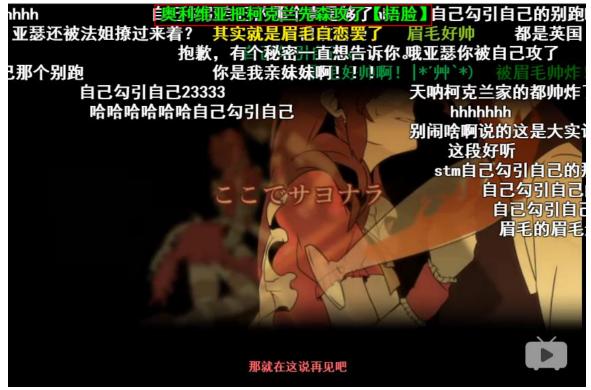


Figure 90. Using a manually typed emoji to describe an action in a "bullet curtain" comment In the highlighted comment (texts in green), the user was describing the romantic scene currently featured in the video. The comment can be translated and interpreted as:

奥莉维亚	把	柯克兰	先森	攻了	【捂脸】		
Olivia	had	Kirkland	mister	attacked	[cover face]		
Figurative meaning: Olivia first played the aggressive romantic role toward mister							
Kirkland (manually typed emoji: [cover face])							

The textual content of the emoji - "捂脸" means the action of covering someone's face when

feeling embarrassed or shy. It resembles the popular emoji "^{So}" which means "face palm". This expression is also completed with the use of a pair of parentheses.

Using Chinese Radicals in "Bullet Curtain" Comments

Among the various types of literacy practices that feature the Chinese writing system, online users of bilibili.com also creatively adopt Chinese radicals. A total of 42 instances of Chinese radicals were identified in "bullet curtain" comments. Bilibili.com users adopt the metalinguistic and graphic features of Chinese radicals to substitute taboo language or stylized Chinese Mandarin expressions.

One of the functions of using Chinese radicals is to substitute taboo expressions. As Chinese characters are often constructed with two or more radicals, users can write a character by separating its radicals as individual characters. For instance, the character "硬" (hard) is composed of two radicals - "石" (stone) and "更" (more). Users can type "石更" to express the meaning of "硬" (hard) in terms of male sexual arousal (Figure 91).



Figure 91. Using Chinese radicals "石" and "更" for "硬" in a "bullet curtain" comment

In this example, the video is featured with three pandas playing with each other. The users were making fun of the scene and referred the play of the pandas as sexual interactions. The highlighted comment can be understood as:

我-----石 更 了 *I*----- stone more (Chinese particle) Figurative meaning: *I am hard (aroused)*.

As explained above, the user of this comment adopts the radicals of "硬" to claim being sexually aroused by watching the video. In this case, the user substitutes the original Chinese character with radicals as a means of a euphemistic expression.

Chinese radicals can also be adopted for their graphic features and used as representations of stylized Chinese Mandarin. For instance, one bilibili.com user wrote his/her comment as "牛牲犇" to express admiration. The three characters are all composed of "牛" (Niú) which is both a Chinese radical and a Chinese character by itself. The character "牛" literally means "cow" and is often used as an adjective stylized Chinese Mandarin to describe someone or something as exceptionally impressive. In this comment, the character "牛" (Yàn) which means "a cow's company" and "犇" (Bēn) which means "fast running" are adopted because of the shared radical - "牛" as an expression of admiration. Both "牪" and "犇" are rarely observed for their original meanings in modern Chinese; however, the user was able to exploit the typographic features of the radicals for an intensified expression of admiration.

Using Capitalized Chinese in "Bullet Curtain" Comments

Another language intensification strategy adopted by bilibili.com users is the practice of using capitalized Chinese. As a literacy practice type revealed in the pilot phase of this study, the capitalized Chinese expressions is constructed by adopting the concept of capitalization in Roman languages as an intensifier for users' feelings. A total of 26 instances of this practice type were identified in "bullet curtain" comments. The highlighted comment in Figure 92 demonstrates a typical example of such usage:



Figure 92. Using capitalized Chinese in a "bullet curtain" comment

In this example, the user wrote "大写的污" which can be directly translated as "capitalized dirty". The characters "大写的" means "capitalized", and the expression "污" is a stylized Chinese Mandarin which is used to describe sexual and obscene content. The user adopts the concept of capitalization as an intensification of the dirtiness of the video.

Non-Standard Literacy Practices in the Text-box Comments of Bilibili.com

Bilibili.com also provides a traditional text-box commentary system for its users besides "bullet curtain" comments. A total of 546 target literacy practices were identified in 440 text-box comments according to the data sampling strategy. Figure 93 below displays the distribution of different literacy practices identified in text-box comments.

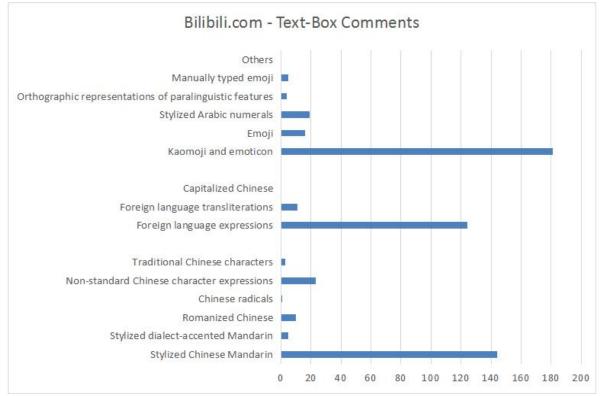


Figure 93. The distribution of literacy practice types in text-box comments

These text-box comments are formatted similar to western video-sharing websites, such as YouTube, with a floor-based commentary system. A user can post his/her comment in a text-box under each video, and reply to other users' comments by "building" commentary floors. An example is provided in Figure 94 to how comments are typically constructed through this textbox commentary system:

([^] ・ω・ [^])日常水 #341 5小时前 回复
有没有纯音乐版!真的很想要纯音乐的因为这个曲子的电音我很喜欢,想要纯音乐版 #340 来目安卓客户端 8小时前 参与回复 这种情况貌似只能找penta·Q本人了呢 8小时前
哈哈哈哈!来!战个痛快! #339 来自安卓客户端 8小时前 回复
听不懂是好的,听得懂反而不好,呵呵,这脑子什么鬼? #337 来目安卓客户端 9小时前 回复
(#)┬─┬有些垃圾弹幕 引战! #336 10小时前 回复

Figure 94. An example of the text-box commentary system

Through the text-box commentary system, users can comment on the video content and reply to the other users. In the following sections, I discuss the most frequently adopted literacy practices by bilibili.com users.

Using Kaomojis in Text-Box Comments

The most common literacy practice type observed in text-box comments is the adoption of kaomojis with 181 instances. As discussed in the previous sections, kaomojis differ from western emoticons as they are read horizontally and composed with double-byte character sets. Moreover, kaomojis can be used to not only describe emotions, but also capture complex actions. Figure 95 shows an example of using one kaomoji in a text-box comment:



Figure 95. Using a kaomoji in a text-box comment

In this comment, a kaomoji is used at the end of the sentence. The comment can be understood as:

After watching the video (I) start to adore the host $(*/\nabla \setminus *)$

The kaomoji " $(*/\nabla \setminus *)$ " represents a person's face with both hands. The facial expression includes two eyes shining like stars which convey the emotion of admiration. The upside down triangle is used to imitate a person's open mouth. In addition, the hands are displayed in symbols of "/" and " \setminus " which resemble the action when a person put his/her hand around the mouth when he/she is showing adoration and/or being shy. The kaomoji is completed with two parentheses as the edges of the face. In this example, the use of a kaomoji not only describes the user's emotion, but also captures the action which often accompanies the emotion.

A kaomoji can also be used as the only meaning making sign for a text-box comment. As some kaomojis include descriptions of both emotions and actions, bilibili.com users are able to construct their entire comment with only kaomoji(s) (see Figure 96).



Figure 96. Using a kaomoji only in a text-box comment

In this example, the kaomoji " \uparrow (' \square ')/" is the only meaning making sign in the comment. This kaomoji describes the emotion of anger, and the action of hand waving as well as the facial expression of a shouting person.

Finally, bilibili.com users also create their own style of kaomojis that reflect mixtures of emotions, objects, and actions. These kaomojis are often packed with layers of meanings. The example below shows a typical kaomoji that contains complex meanings:

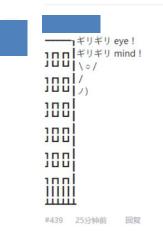


Figure 97. Using a creative kaomoji with expressions of emotions, objects, and actions In the example above, the kaomoji captures a person jumping out of a building, while chanting "ギリギリ eye! ギリギリ mind!" The chanted sentence "ギリギリ eye! ギリギリ mind!" is in fact a part of the lyric in a Japanese song "いけないボーダーライン" (Forbidden Borderline) from the Japanese animation series "超時空要塞Δ" (Macross Delta). Due to its simple and rhythmic pace, the song soon gained popularity and was used as the source for various music videos on bilibili.com. As a result, many users claim that the song is somewhat "brainwashing" as it was circulated online. The user of the sample comment was expressing his/her frustration of the excessive use of the song by picturing a person jumping out of the building while uncontrollably thinking about the lyric of the song. In this example, the user expresses his/her feeling through the kaomoji that captures emotions, objects, actions, and texts. The entire comment is also multilingual with Japanese and English.

Using Stylized Chinese Mandarin in Text-Box Comments

Similar to the findings from posts/comments in Weibo and "bullet curtain" comments in bilibili.com, stylized Chinese Mandarin is among the most frequently adopted literacy practice types in text-box comments from bilibili.com as well. A total of 144 uses of stylized Chinese Mandarin were observed.

One popular stylized Chinese Mandarin observed in text-box comments is the adoption of "赞" (Zàn) for meanings of admiration and/or agreement. In modern Chinese Mandarin, the character "赞" is often used with "美" (Měi - beauty) as "赞美" which means "praise". When social media sites, such as Weibo, were established in mainland China, "赞" was adopted to perform the function as the "thumb up" or "like" in western CMC sites (e.g., Facebook) for online content. Later on, users of other websites start to use the same character for the similar function. Figure 98 below shows an example of using "赞" to show the user's admiration of the video:



Figure 98. Using "赞" (praise) to show admiration of the video in a text-box comment: "Editing is great! (kaomoji: cat face)"

In the comment above, the expression "赞" is used as an adjective of showing admiration followed by a cat kaomoji used to express cuteness. It is worth mentioning that the text-box commentary system does not offer icons of "thumb up" or "like" for its users to click with. Therefore, using the stylized Chinese Mandarin "赞" is one of the conventional ways to show admiration and/or agreement. Some expressions of stylized Chinese Mandarin also reflect the Chinese culture. For instance, bilibili.com users often uses "跪" (Guì) which means "kneel" or "on one's knees" to demonstrate their admiration or feelings of surprise/shock (See Figure 99).



Figure 99. Using "跪" (kneel) to demonstrate admiration or feelings of surprise/shock in a textbox comment: "(emoji: cat face) finished watching on my knees"

The concept of "kneel" and "on one's knees" is part of Chinese culture and traditions. In the traditional Chinese culture, a person should kneel to deities, divine powers (e.g., the emperors) and people of higher ranks and/or older ages. This concept is adopted in online communication and utilized figuratively to show the admiration or feelings of surprise/shock. Therefore, in the example the user was showing how much he/she was impressed by the video.

Last but not least, many stylized Chinese Mandarin expressions were in fact words/phrases and sentences adopted from popular online content. Online users often create or play with expressions related to popular news, texts, songs, and videos. Once a creative expression is widely accepted, adopted and practiced, it becomes a literacy contention. Figure 100 below shows an example of using stylized Chinese Mandarin - "什么鬼" which was originally from a popular show online:



Figure 100. Using "什么鬼" (what is the devil/ghost) to show confusion in a text-box comment: "It is good that you understand it, while it is bad that you do not understand it, hehe (sneer), what is the devil/ghost of this brain?"

Using Foreign Language Expressions in the Text-Box Comments

Foreign language expressions were also observed in text-box comments with a 124 instances. Two languages, English and Japanese, were adopted by bilibili.com users. Specifically, 81 instances of English expressions and 43 instances of Japanese expressions were identified.

English Expressions

Bilibili.com users often borrow English expressions in their text-box comments. These English expressions are practiced through complete sentences, individual words/phrases, abbreviations, code-mixing, and symbolic representations. The sections below present how these literacy practices with English expression are utilized.

The first type of using English expressions is the use of complete English sentences. In other words, the English expressions utilized in these practices are sentences with syntactic and grammatical features of English. An example of such practices is presented below:

> 好酷! it's so beautiful! #127 来自安卓客户端 15小时前 回复

Figure 101. Using a complete sentence in English in a text-box comment

In this comment, a complete English sentence "it's so beautiful!" was typed after the Chinese expression "好酷" which means "very cool". Although the user did not capitalize the first letter "i", the sentence is complete and otherwise standard. However, using complete English sentences is rarely observed in text-box comments. Only four such instances were identified.

Other than complete sentences, English words/phrases and abbreviations were also utilized. The use of these English expressions is often embedded and code-mixed within sentences in Chinese. The comment below shows an example of this usage:

> 第一眼看成GAY吓得我又返回去看结果是GAV妈的(ノ=Д=)ノーム #131 来自安卓客户端 8小时前 回复

Figure 102. Using an English word and an abbreviation in a text-box comment In this example, an English word "GAY" and an English abbreviation "GAV" were used with Chinese and a kaomoji. The sentence can be translated as:

On the first look, I thought it was GAY and scared me. I went back to take a look again and as a result I found out it was GAV. Shit (kaomoji: "being upset while flipping a table").

The word "gay" was used in the sentence to suggest same-sex romance, and the abbreviation "gav" (gay adult videos) was used for gay-oriented pornography. The user was describing a character in the video whose name is "Gay" with a playful twist through which the alternative meaning of "Gay" was enacted. The user built this play further by adopting the term "GAV" in the comment. Despite of the playful orientation of using English expressions, sometimes English words/phrases were adopted because there are no Chinese expressions for certain terms and concepts. For instance, in the example of Figure 103 below, the dance genres - 'breaking" and "popping" - were used in their English spelling due to the lack of Chinese translations of these terms.

popping和breaking结合还是?求大神科普一下 来自安卓客户端 9小时前 #104

Figure 103. Using English expressions for non-translatable terms and concepts

Besides the adoption of the English expressions with their original meanings, Chinese users also assign new meanings to the English language. Similar to the findings in the "bullet curtain" comments, the English word "up" is used by Chinese online users for non-directional meanings (see Figure 104).



Figure 104. Using the English word "up" for the meaning of "the uploader of the video" in a text-box comment
The word "up" was used to mean the uploader of the video. This new meaning of "up" is likely
the result of the shortening strategy in online languages and presents the flexibility of online
communication in terms of creating new meaning making strategies.

Code-mixing is another frequently adopted strategy by bilibili.com users with English expressions. Creative expressions are constructed by mixing Chinese and English languages. Figure 105 below demonstrates how English-Chinese code-mixing is practiced:



Figure 105. Using English-Chinese code-mixing in a text-box comment

In the sample comment, an English sentence is completed with a Chinese character "叼". The literal meaning of the character "叼" (Diāo) means to "hold or grip something in the mouth". This character was used as a homophone for "屌" (Diǎo) which either literally means the male's

sexual organ, or figuratively describes someone or something as exceptional or remarkable. In the example, the figurative meaning was adopted. The comment can be understood as "why are you so good". Although the user did not capitalize the initial letter of "why", the sentence itself is grammatical in English with a Chinese adjective at the end to form code-mixing.

Lastly, English can also be adopted for symbolic meanings. Specifically in text-box comments, a user applies the letter "X" as a sign for unidentifiable information (see Figure 106).



Figure 106. Using the English letter "X" for unidentifiable information in a text-box comment The comment can be translated as:

The biggest drug gang in XX has been captured

In this comment, the concept of "毒" (drug), which was discussed previously in the "bullet curtain" comments, means the people who are addicted to certain videos on bilibili.com. The user adopts the genre of news reports on crimes to to make fun of the people who cannot help watching the video. The expression "XX" was adopted as information of location usually found in news reports.

Japanese Expressions

Besides English, Japanese is also adopted in text-box comments. Bilibili.com users apply Japanese expressions for mainly two purposes - to present the titles/lyrics of Japanese songs/animations or to express opinions in Japanese languages. In the following analysis, I provide an example for each purpose of using Japanese expressions.

Japanese expressions were found to be used to present the titles/lyrics of Japanese songs/animations. Due to the strong influence of Japanese ACG (animations, comics and games) culture on bilibili.com, many videos in the website contain Japanese songs and animations. The Chinese users sometimes choose to use the original Japanese expressions for these contents. The comment below demonstrates an example of using the original expression for a Japanese song:



Figure 107. Using the Japanese expression for a Japanese song in a text-box comment In this comment, the Japanese song "僕らの戦場" (Our Battlefield) was typed in the original Japanese script. However, in the user's comment, the Japanese Kanji "戦" was replaced as "戰" which is a traditional Chinese character that shares similar meaning to the Kanji which means "battle". The song is the theme of the famous Japanese animation series "超時空要塞A" (Macross Delta). Although the user's Japanese expression is not entirely standard with the mixing of a traditional Chinese character, it is likely that the user intended to express the title of the song in Japanese with other parts of the texts in Japanese Kanji and Hiragana.

Besides using Japanese expressions for content related to Japan and Japanese ACG, Japanese expressions can also be adopted to demonstrate opinions or feelings. That is, bilibili.com users who have some knowledge of Japanese may post comments about their attitude and feelings in Japanese. The example in Figure 108 shows how a user constructed his/her comment in this way:



Figure 108. Using a Japanese expression in a text-box comment

The comment in the example above contains Japanese scripts only. The expression " $\forall t \circ l t \rangle$ $\neg t$ " can be translated as "(this was) great". The user adopted the Japanese expression for the comment entirely to express his/her opinion of the video. Furthermore, the metalinguistic features of Japanese are also reflected by using the tense marker " $\hbar \circ \hbar$ " for past actions or feelings. It is worth noting that the video content is featured with two Japanese girls performing a piece of dancing. In this way, the context of the video content may also have led to the user's response in Japanese.

Comparisons of Literacy Practices between Weibo and Bilibili.com

From the three CMC communication spaces from Weibo and bilibili.com, I identified all of the target non-standard online literacy practices. These online literacy practices demonstrate the complex linguistic and semiotic resources of Chinese online users from the popular microblogging and video-sharing sites. These two target sites share many similarities in terms of the observations of some literacy practice types, and there are a few noticeable distinctions as well. The following sections provide a discussion on the comparison of literacy practices adopted by Chinese users between Weibo and bilibili.com.

Similarities in Non-standard Literacy Practices on Weibo and Bilibili.com

The findings suggest that some types of non-standard literacy practices were favored by Chinese online users in both Weibo and bilibili.com in spite of different CMC affordances. It was observed that utilization of stylized Chinese Mandarin, foreign language expressions and foreign language transliterations of English, Japanese and Korean are the most frequently adopted non-standard literacy practices in both sites. Among all the language features identified in the target literacy practices, Chinese Mandarin remains the main source of creative and playful online communication. Many of the stylizations are originally from popular online content, social events, and/or exploitation of cultural norms and traditions. These stylizations are "marked choices" with intentions of being playful and are associated with social meanings reflected in daily life (Su, 2003) of mainland China. In addition to stylized Chinese Mandarin, other creative literacy practices such as use of Chinese radicals, traditional Chinese characters, non-standard Chinese character expressions, Romanized Chinese, and dialect-accented Chinese were also observed in micro-blogging posts/comments from Weibo, and "bullet curtain" and text-box comments from bilibili.com.

Besides the Chinese languages, utilization of foreign language features are also frequently adopted. Users of Weibo and bilibili.com apply various strategies when constructing their online content through foreign language expressions, including using the original foreign scripts, adoptions of code-mixing, transliterations based on sounds and written scripts, and symbolic expressions originated from foreign pop cultures and their related online communities. However, it is also worth noting that users on both sites seldom construct their messages completely in foreign languages. Except for a few cases, Chinese online users often adopt foreign language features in meaningful and formulaic chunks in terms of words/phrases, codemixing, and/or through transliterations in Chinese Mandarin. In addition, many foreign expressions have also been "localized/domesticated" and are now used with new meanings (e.g., the phonetic transliteration of "high" in Chinese as "嗨" to suggest excitement with no relations to drug use). Within the scope of the current study, the users' full multilingual profiles and their proficiency levels in foreign languages such as Japanese and Korean are unknown. Nevertheless, some users were observed utilizing foreign language features as part of their online communication.

In addition to the shared popularity of using features of Chinese and foreign languages for online communication, other playful and creative literacy practices were also observed in both sites through various communication mediums. The fourteen types of non-standard literacy

practices categorized in this study present a glimpse of the linguistic landscape of online communication in mainland China.

Differences of Non-standard Literacy Practices on Weibo and Bilibili.com

Some differences of using non-standard literacy practices were observed between Weibo and bilibili.com. Specifically, users under investigation differ in terms of the adoptions of nonlinguistic semiotic signs such as emojis and kaomojis, the choices of using foreign language features in Korean and Japanese, and the adoptions of expletives. These differences were likely related to the different available CMC affordances as well as the influence of different online communities in the two sites.

First, users of Weibo and bilibili.com demonstrate different preferences on their use of emojis and kaomojis. Users of Weibo adopt emojis overwhelmingly more frequently than kaomojis. In contrast, bilibili.com users tend to express their emotions and feelings through kaomojis. This difference is likely related to two factors. Firstly, Weibo offers a plethora of animated emojis through its micro-blogging posting and commentary system. These emojis are constantly updated with new characters, emotions, and/or actions through Weibo. On the other hand, bilibili.com offers basic emojis which are un-animated. Secondly, due to the influence of Japanese ACG culture, users of bilibili.com are often more exposed to and familiar with meaning making signs and expressions from the Japanese popular and youth cultures. As a result, it is likely that bilibili.com users are more familiar with kaomojis which originated in online communication in Japan, and therefore use more kaomojis in their online discourse.

It was also observed that users of Weibo adopt Korean expressions and/or Korean language features more frequently than those of Japanese, while users of bilibili.com present the opposite trend. In Weibo, a total of 242 instances of using foreign language expressions and

transliterations of foreign languages were identified. Among these uses, 18 instances were Korean (7.4%), and 45 instances were Japanese (18.6%). On the other hand, in bilibili.com a total of 5927 instances of using foreign language expressions and transliterations of foreign languages were identified. 24 instances were Korean (0.4%), and 3149 instances were Japanese (53.1%). The main reason of this difference may due to the data collection strategy adopted in this study. As the most popular micro-blogging website in China, Weibo attracts various types of users, including celebrities who opened their accounts to interact with other users. The strategy of collecting the top five posts from the "Hot Weibo" section each day include several posts from popular Korean celebrities. This may have contributed to more instances of Korean-related meaning making signs identified in Weibo. On the other hand, data collected from bilibili.com reflect the influence of Japanese themed content (e.g., the Japanese animations) of the website which may have resulted in the substantial increase in the adoptions of Japanese language features.

Finally, the comments sampled from bilibili.com contain considerably more expletives and/or sexual and taboo topics than those from Weibo. In other words, bilibili.com seems to provide a more "carnivalesque" space for online communication. This is partly due to the fact that the micro-blogging site Weibo requires user names and profile pictures in order for anyone to post status update or comments, although the names and pictures can be pseudonym or nonpersonal pictures. In contrast, bilibil.com users do not need any personal information to post comments and have greater anonymity. Therefore, bilibili.com users may have fewer constraints in posting expletives.

Summary of the Chapter

This chapter provides an overview of the study's findings with analyses of the most frequently observed literacy practices through three online communication mediums in Weibo and bilibili.com. Strictly following the data collection and sampling approach, all fourteen types of literacy practices proposed in the pilot study were identified. Users of the two CMC sites adopt these literacy practice types individually or in combination with each other for meaningful online communication characterized with creativity and playfulness. The findings suggest that Chinese Mandarin remains the major source of creative and playful CMC conventions as the stylized Chinese Mandarin is the most common literacy practice type in both Weibo and bilibili.com despite of different CMC facilitation. Some of the other frequently adopted practices, such as foreign language expressions and transliterations of foreign languages, reflect the multilingual potentials of the Chinese users who may or may not be a proficient communicator of other foreign languages. Finally, the findings also indicate that meaning making strategies of CMC are often extended beyond linguistic codes and include other semiotic signs, such as the adoptions of stylized Arabic numerals, emojis and kaomojis, and orthographic representations of paralinguistic features. These findings reflect the complex and hybrid linguistic and semiotic repertoires of Chinese online users, and their capability to cope with different communicative mediums of CMC via micro-blogging posts and comments, "bullet curtain" comments, and the traditional text-box commentary system. In the following chapter, I will provide an in-depth discussion of the findings of the study in terms of the plurilingual and heteroglossic linguistic ecology of CMC in mainland China.

CHAPTER V. DISCUSSIONS AND CONCLUSIONS

Discussions of the Findings

The findings of the study exhibit the complexity of online communication from two popular Chinese websites - Weibo and bilibili.com. A total of 14 different types of non-standard literacy practices were identified from 2021 Weibo posts and comments, 27438 bilibili.com "bullet curtain" comments, and 546 bilibili.com traditional text-box comments. These practices include adoptions of linguistic features from Chinese and other foreign languages, and semiotic signs beyond linguistic codes (e.g., kaomojis). The users of the target CMC sites demonstrate their ability to draw on multilingual resources, competence in exploiting various CMC affordances, and knowledge of various domains of online content such as Japanese ACG. Furthermore, as others have argued (e.g., Blommaert, 2010; Canagarajah, 2011; Lee, 2017), the findings deconstruct the traditional notion of multilingualism in the sense of knowing or using multiple languages in terms of proficiency (Marshall & Moore, 2013), and the literacy practices revealed in the current study reflect Chinese online users' plurilingual repertoires through heteroglossic communication.

The Complexity of Meaning Making through Chinese Languages

Not surprisingly, the study's findings indicate that Chinese languages remain as primary source for creative and playful online communication of users from Weibo and bilibili.com. Six of the 14 types of non-standard literacy practices identified in the study contain features of the Chinese languages, such as characteristics of Chinese Mandarin, regional dialects, the Chinese pinyin system, the Chinese radical system, and simplified and traditional Chinese writing systems. These features often occurred in combination with other features of Chinese languages, foreign languages, and/or non-linguistic signs for meaningful communication.

Stylization of Chinese Mandarin

Among these features across two different CMC sites which provide three different types of commentary systems, stylized Chinese Mandarin is the most frequently observed non-standard literacy practice type. These practices are stylized in the sense that they did not exist in standard Chinese before and are often given new meanings in online contexts (Yang, 2007; see also Yuan, 2013). Wong, Xia and Li (2006) also point out that Chinese online users frequently invent new expressions or give new meanings to existing expressions. The findings reveal that the stylized Chinese Mandarin expressions are often sourced from popular online content (e.g., using "什么 鬼" - what is the devil/ghost from a popular online video), existing sociocultural conventions/incidents (e.g., using "跪" - kneel to show admiration), and/or users' responses to existing CMC affordances and constraints (e.g., using "赞" - praise for the "like/thumb up" function in social-networking sites). It can be challenging to trace the original root of these conventions, because the meanings of these stylized Chinese Mandarin are usually not officially codified anywhere and may shift according to individuals' understandings and/or different communicative contexts. Nevertheless, Chinese online users from Weibo and bilibili.com demonstrate competent online literacy proficiency of modern CMC by adopting stylized Chinese Mandarin.

Representations of Regional Dialects

The study reveals various representations of Chinese regional dialects besides Mandarin. Despite of the enforcement of standard Chinese Mandarin in public areas such as education,

broadcasting, and governmental affairs, mainland China remains a multi-dialectical nation where various mutually unintelligible dialects are spoken on a daily basis. Although some dialects, such as Cantonese, can be written in a semi-codified writing system largely composed of traditional Chinese characters and character representations of Cantonese onomatopoetic sounds (Lee, 2007), most regional dialects exist exclusively in spoken forms and often lack written forms. This phenomenon is called "有音无字" (sounds without characters) in Chinese (Liu, 2011). Lee (2017) specifically points out that digital media has the potential of revitalizing "lesser-written languages", such as minority languages and regional dialects. This is due to the wide range of choices in terms of meaning making signs offered by CMC (i.e., Romanized letters, characters, etc.) and the relatively more flexible communicative spaces in some CMC platforms. With a plethora of Chinese characters and other meaning making signs available to online users, spoken dialectal features were adopted by some users of Weibo and bilibili.com for communication. The stylized dialect-accented Chinese include adoptions of larger groups of dialectal families (e.g., using "咋" from the northeastern dialectal family) and more focused regional dialectal groups (e.g., using "逼逼" from the Beijing dialectal group). In addition, Cantonese as a variety of the Yue dialects is also represented in the study. Written Cantonese has not been officially codified, and is under pressure with the enforcement of Mandarin education and the national policy of Mandarin as a lingua franca in places such as Hong Kong (Lee, 2017). Nevertheless, similar to practices described by Lee (2007), some users of Weibo and bilibili.com were able to use simplified Chinese characters with Cantonese homophones to produce the Cantonese dialect in CMC. It is worth noting that in these contexts, homophonetic simplified Chinese characters are the major meaning making resources used to represent spoken dialects. This is different from the previous studies of online written Cantonese in Hong Kong (e.g., Lee, 2007) where Cantonese

was often represented through Romanization and English-Cantonese code-mixing. This may be due to the different status of English in daily communication between Hong Kong and mainland China, as English is used in the public sectors more in Hong Kongers (Lee, 2002; Lee, 2007) than mainland China.

In addition, some users adopted dialectal features for joy or pleasure. For instance, the users of bilibili.com adopt the Cantonese swear words "屌你老母" - Diu Nei Lou Mou to play with the animation character's name "雷姆" - Léi mǔ as "丢你雷姆" - Diū nǐ léi mǔ. Liu (2011) suggests that creative linguistic practices that represent regional dialects, such as practices revealed in the current study, may result from a lack of a standard writing system as well. Furthermore, the use of various regional dialectal features reflects the polycentric nature of language use, and that linguistic resources and norms are shifted in relation to other norms (Blommaert, 2013). In other words, in certain communicative spaces and contexts, the norm of using a type of linguistic resource (e.g., Chinese Mandarin) may be changed to another one (e.g., Cantonese) as demonstrated in this study.

Using Pinyin and Homophones in Chinese Online Communication

The phonetic system of the Chinese languages is another important resource of creative online communication. Chinese online users adopt the pinyin system as well as homophones of Chinese characters to facilitate their communication. For instance, the pinyin system is often adopted for Romanization of Chinese. Users of both Weibo and bilibili.com adopt pinyin initials, complete pinyin spellings, or the combination of the two. Although some uses of complete pinyin expressions may appear random, many of these practices function as euphemisms for taboo expressions (e.g., Chen, 2014; Yang, 2007). The motivations of these practices may have oriented from the avoidance of online censorship (Yang, 2007); however, some of the

expressions which are not supposed to be censored were also stylized in this fashion. This finding is compatible with what Chen (2014) has suggested that many pinyin acronyms in Mandarin Chinese are adopted both for efficiency and for indirectness.

Moreover, homophonetic characters are also utilized. Lotherington and Xu (2004) categorized these practices as "character homophones" through which Chinese users often adopt non-standard character expressions for certain words and phrases. It was observed in this study that users adopt non-standard character expressions for taboo expressions as a strategy for indirectness. In addition, some of the examples (e.g., using "卧槽" to substitute "我肏" due to typing convenience) suggest that the Chinese pinyin-character input system may also have resulted in these practices. Moreover, it was observed that users also deliberately adopt non-standard character expressions similar to accented speech (see Yang, 2007) or baby talk to convey a sense of cuteness in their messages. In considerations of the purposes stated above, it is clear that Chinese online users may intentionally choose "incorrect" characters as homophonetic representations of certain Chinese words and phrases in their online discourse.

Diversity of Written Scripts

In addition to the sound system of the Chinese languages, features of the Chinese writing scripts can also be adopted for meaning making. In the study, 227 instances of texts using traditional Chinese characters were observed. Although it is unknown if these uses are in fact practiced by populations that adopt traditional Chinese writing (e.g., Cantonese speaking regions), traditional characters remain as an alternative style of Chinese scripts in online communication. Some of the most popular pinyin-character input software, such as Google Chinese Pinyin and Sougou Pinyin, support convenient input transitions between simplified and traditional Chinese characters. Besides the adoptions of an alternative written character system,

45 cases of using Chinese radicals were also identified. As a logographic language, Chinese characters are often composed with meaningful radicals which can also be used as individual characters as well. This unique feature allows Chinese users to play with radicals, such as separating the radicals in a character to form a taboo expression, often adopted for indirectness or avoiding online censorship.

These non-standard literacy practices discussed above indicate that Chinese users are capable of adopting various meaning making features of Chinese languages to make their online communication decorative and playful. These features include the sounds, scripts and graphics in Chinese languages which are combined with characters, foreign languages, and/or emojis and kaomojis to construct unique online literacy practices. With the knowledge of various CMC content (e.g., ACG knowledge) and by exploiting, responding to each platform's constraint and affordances (e.g., the "bullet curtain" commentary system), Chinese online users adopt unique meaning making strategies to produce the Chinese languages for creative, playful and indirect texts, while avoiding potential online censorship.

The Multilingual Potentials of Chinese Online Users

The study demonstrates the significant role of multiple foreign languages in Chinese users' online communication. Through three types of CMC models (i.e., the micro-blogging posts/comments, the "bullet curtain" comments, and the traditional text-box comments), various uses of foreign language features were observed. These strategies include the adoption of original foreign language expressions - individually or code-mixed/code-meshed with Chinese Mandarin, transliterations of foreign language expressions, and exploitations of metalinguistic features of foreign languages (e.g., adoptions of "capitalized" Chinese).

The Role of English

In both Weibo and bilibili.com, Chinese users adopt expressions from foreign languages such as English, Japanese, and Korean; however, English remains a major resource of foreign expressions by Chinese users. Users of Weibo and bilibili.com often construct their messages with English words and phrases, English abbreviations, and code-mixings of Chinese and English that form new expressions. Popular expressions, such as "cool" and "BGM" (background music), are adopted which may be due to factors such as convenience in typing, or to users' own preferences for self-expression. Some of the borrowed English words and phrases are expressions with meanings that are more easily construed in English (e.g., "breaking" as a style of street dance). Online users also create new meanings for English expressions (e.g., using "up" to mean the uploader of the online content) as well. Furthermore, metalinguistic knowledge such as Roman letter capitalizations have also been exploited in relation to Chinese characters. Some users directly translate the word "capitalized" as a descriptor in Chinese to function as intensification of any adjectives that follow. These practices reflect the result of translocalization of languages and signs that are often adopted to projects new meanings (Androutsopoulos, 2011) and communicative functions in a globalized and internet-connected world (Blommaert, 2010). These changes and exchanges of meanings are facilitated by the internet, which contributes to an increasingly mobile world in which "multilingual encounters people across spaces, online and offline" (Lee, 2017, p. 8). It is also worth mentioning that although in a few cases English was adopted as the only linguistic code, most of the online communication that involves English is composed with other languages and/or non-linguistic semiotic signs.

The Increasing Popularity of Japanese and Korean

The study also exhibits the influence of Japanese and Korean languages towards the linguistic ecology of Chinese online communication. As the second mostly observed foreign language, Japanese plays an important role in the target Chinese CMC sites, especially for bilibili.com. One of the key reasons is that bilibili.com is originally themed with emphasis on Japanese ACG culture and has a strong and stable fan-base of users who have some knowledge of the Japanese language from ACG content. The utilization of Japanese expressions is often demonstrated by Chinese users' adoptions of popular Japanese Hiragana (e.g., using "O" for meanings of possessions) and Japanese Romaji (e.g., using "sama" for the Japanese expression of older sister - "様"). Moreover, Chinese users also exploit the linguistic similarities between Chinese and Japanese in terms of the written scripts as well. Specifically, the users utilize the resemblance between Chinese characters and Japanese Kanji, and use similar characters to represent the meanings and written forms of certain Japanese expressions (e.g., using "振付" as the Chinese character expression for "振付" - ふりつけ in Japanese for "choreography"). In addition to Japanese, Korean has also been observed in use, especially for Weibo as it features several posts by Korean celebrities. Compared with Japanese, the Korean expressions adopted by Chinese users are less diverse and are often associated with more fixed phrases of endearment for celebrities or expressions of love (e.g., using "오빠" as an endearment for male Korean celebrities). These literacy practices are likely related to the increasing influence of the Korean pop culture especially in many other Asian countries over the last decade.

Transliterations of Foreign Language Expressions

Another important strategy applied by Chinese online users is the transliteration of foreign language expressions. English, Japanese, and Korean expressions were transliterated into

Chinese based on the sounds as well as written scripts. Transliterations through the resemblance of sounds were observed in all three foreign languages identified, while Chinese transliterations of written scripts were only found in Japanese expressions.

Transliterations through similar sounds. By matching similar sounds, Chinese online users are capable of choosing various characters to substitute the original foreign expressions. The selected characters often reflect the syllabic features of foreign expressions, and are tailored to individual users' own styles, or at the convenience of the input software (Lotherington & Xu, 2004). These transliterations are often done purposefully, as these practices does not necessarily increase the speed of input (e.g., using "因缺思婷" - Yīn quē sī tíng for "Interesting" -/'int(ə)rəstiNG/). Moreover, some transliteration practices may be motivated for primarily by playfulness (Gao, 2006). These types of practices often involve notions of sexual or other vulgar content (e.g., using "屎大颗" - Shǐ dà kē which means "shit big chunk" for "Stark"), which reflect the "carnivalesque" nature of communication (Bakhtin, 1984). In addition, many transliteration practices have resulted in the creation of new meanings. As semiotic signs travel geographically and through the Internet, the meanings often shift and are adopted for the new situated contexts (Blommaert, 2010; Pennycook, 2007). This translocalization of meanings is also present in this study, as the meanings of transliterated expressions can be changed for new communicative contexts (e.g., using "嗨" - Hāi to express happiness/excitement instead of the meaning in English "high", as the result of drug use).

Transliterations through similar written scripts. Chinese online users exploit the features of written scripts through transliterations of foreign languages as well. This transliteration style is found only between Chinese and Japanese in the current study. Due to the unique connections between Chinese characters and Japanese Kanji, Chinese online users often choose characters to

resemble certain Japanese expressions that include not only content word, but also metalinguistic features such as honorifics. Many of these Chinese characters adopted for transliterations are not the exact same compared with the original Japanese Kanji (e.g., using "周目" in Chinese for "週 目" in Japanese, which means frequencies/times); nevertheless, the characters chosen are often the closest in terms of script resemblance and/or meanings in relation to the original scripts. The transliteration of scripts is also relatively more conventionalized than sound transliterations. As most of the transliterated Japanese expressions have corresponding Chinese translations, the script transliteration practices are likely to be done purposefully to either reflect the knowledge of the Japanese-related culture or exhibit advanced literacy proficiency of the internet that projects a modern identity (Gao, 2007). Within the scope of the current study, transliterations through written scripts are often adopted from the ACG (animations, comics, and games) communities influenced by the Japanese pop culture.

Chinese Online Communication as Plurilingual

The multilingual practices revealed in the current study reflect Chinese online users' plurilingual repertoires. While features of foreign languages, such as English, Japanese and Korean, are used, these practices rarely occur as complete syntactic structures and often involve code-mixing. Throughout the study, only a few cases of foreign-language-only texts and complete sentences produced in foreign languages were identified. Within the scope of a screen-based research, each users' complete linguistic background cannot be known. Nevertheless, some scholars of sociolinguistics (e.g., Heller, 2010; Cenoz & Gorter, 2011) have argued that in terms of multilingualism, the relations among languages are often fluid, and languages should be considered as practices instead of competence with no clear boundaries. Canagarajah (2011) also points out that people are capable of multilingual practices even when they have only a little

knowledge of other languages. In this sense, the Chinese users investigated in this study are able to utilize every bit within their linguistic repertoires to construct their multilingual online discourse. Beyond the traditional notions of multilingual proficiency, the study also demonstrates how multilingualism is manifested in online contexts through which users demonstrate advanced knowledge of online literacy. In other words, the notion of multilingual proficiency should be reconsidered and reconstructed in terms of online literacy as the internet brings about new forms of language contact and use, as well as space for creative multilingual practices often involving certain features of languages, instead of larger, codified linguistic systems.

Online Communication Beyond "Languages"

The findings demonstrate the important role of semiotic resources beyond traditional notions of languages as linguistic codes and systems specific to nations (Blackledge & Creese, 2010; Garcia & Li, 2014). The literacy practices identified in Weibo and bilibili.com also reflect the users' understanding and utilization of non-linguistic meaning making signs (e.g., emojis and kaomojis). In this way, the users manifest their typographic, orthographic, and phonological knowledge of within/between-language online communication, as well as their sensitivity toward graphic representations of meanings through CMC affordances.

Typthographic Practices

Users of Weibo and bilibili.com have shown their capabilities to deconstruct and reconstruct languages in terms of typographic, orthographic and phonological features through cross-language and within-language communication. Herring (2016) refers to these practices as "typthographic" which combines typographic and orthographic representations of language features. Through "typthographic" practices, online users exploit similarities of sounds and graphics to substitute characters, while paying attention to metalinguistic principles to achieve

language play. In the current study, many of the Chinese transliterations of foreign languages were practiced through "typthography" within the Chinese languages. This is likely due to the complexity of the Chinese writing (i.e., characters and radicals) and its phonetic systems (i.e., the Chinese pinyin) as well as the multi-dialectical linguistic reality in mainland China. It is also worth noting that Chinese users of the selected CMC sites, especially bilibili.com, have a high frequency of adopting the typthographic features of Japanese; while for English, more examples were identified as direct borrowing and code-mixing practices. This might result from the different levels of linguistic similarities in terms of the writing systems among Chinese, Japanese, and English, and/or the consideration of the input and typing convenience. Furthermore, Arabic numerals were stylized for functions other than cardinal/ordinal meanings as well. These practices, also known as "numeric quasi-homophones" (Lotherington & Xu, 2004), include utilization of homophonetic Arabic numerals for Chinese Mandarin (e.g., using "6" to describe someone/something as exceptionally good) and Japanese (e.g., using "543" for a Japanese guitarist's nickname). The stylized Arabic numerals identified in the study provide another resource for Chinese online users' typthographic practices.

Non-linguistic Semiotic Resources

Users of Weibo and bilibili.com exploit various meaning making signs facilitated by different CMC contexts. The study reveals the active involvement of emojis and kaomojis in Chinese users' online communication. These meaning making signs not only reflect emotions and feelings, but also describe certain objects as well as complex movement and actions. In some cases, users compose their messages entirely with emojis and/or kaomojis. While the CMC affordances may affect the choices of different types of meaning making signs of emojis (mostly adopted in Weibo) and kaomojis (mostly adopted in bilibili.com), traditional western styled emoticons were rarely observed. This may result from the different different input units between English and Chinese (single vs. double character sets). Specifically for kaomojis, the adoptions of these semiotic signs are relatively more recent in Japan and later China (Markman & Oshima, 2007; Chang, 2009). For emojis, an interesting style of literacy practices was identified as "manually typed emojis" through which Chinese users type the interpretations of various emojis and decorate them with parentheses. These practices do not necessarily save time for typing, and may be adopted to accommodate the lack of emoji input systems or for a decorative purpose in writing. In addition, Lee (2017) points out that interpretations of emojis and Kamojis may vary according to different individuals and/or contexts. In other words, the meanings of these meaning making signs are not static and should not be regarded as in terms of fixed "rules" (Deumert, 2014). In addition to emojis and kaomojis, stylized Arabic numerals were also adopted as conventionalized symbols in Chinese online communication. Different from the stylized Arabic numerals as numeric homophones, these numerals were conventionalized due to non-linguistic features. For instance, the numeral for laughter "233" was conventionalized from Japanese ACG content. These numerals may be started as in-group conventions, but have gained popularity in other CMC contexts and platforms as well. The non-linguistic meaning making strategies discussed above have further enriched Chinese online users' semiotic resources, and contributed to the hybridity of textual and multimodal online interactions.

Influence of Youth Culture on Online Communication

The study demonstrates the influence of popular and youth culture in terms of shaping the online linguistic ecology of China. The findings indicate Japanese and Korean popular cultures contribute to the creations of new conventions and certain types of literacy practices adopted by Chinese online users. Many of the creative and playful literacy practice types identified in the

study can be traced back to the Japanese ACG (animations, comics, and games) (e.g., using the Japanese ACG oriented term - "萌" for cuteness) or Korean pop culture (e.g., using Korean endearment such as "wuli" for celebrities). For instance, the concept of "萌" was originally borrowed from the Japanese expression "萌え" and its meaning of cuteness in Japanese ACG culture. It is used now as a Chinese online vernacular term for "cute" (de Seta, 2014). This term can also be applied to anything beyond ACG characters that have the potential of being cute, such as furry animals. Specifically for bilibili.com which is heavily themed with the ACG culture, many literacy practice types may have been adopted for in-group interactions to mark the users' writings as unique and distinctive (Herring, 2016). However, considering the large user base of younger generations from the two target CMC sites, these literacy practices also influence the online communication in China (see also Gao, 2005).

The awareness and utilization of languages as features instead of codified structures, as well as the adoptions of non-linguistic meaning making signs further deconstruct the notion of "knowing" a language and bring further complications of written texts online. Chinese users in the study demonstrate their ability to navigate through various typthographic features of Chinese Mandarin and other foreign languages. In addition, other meaning making signs originated from pop and youth cultures were also conventionalized and adopted to aid Chinese users' online communication. Together, these practices contribute to the notion of "multiliteracies" (Bodomo & Lee, 2001) which suggests the existence and expansion of multiple literacies, such as texts and icons, which reflect social and economic changes brought about by technology.

Heteroglossic Online Communication Through Chinese CMC Sites

The study reveals various literacy practice styles adopted by Chinese online users and reflect the heteroglossic nature of online communication. Bakhtin (1981) describes heteroglossia

as the way people communicate by adopting others' speech through various stylizations, genres, accentuation, and so forth. In this view, no utterances can be produced in the exact same manner as the individuals adopt their own coloration of these utterances in different sociocultural and sociohistorical contexts. The heteroglossic ideology of language use also resonates with some other conceptual notions such as "bivalent multivocality" (e.g., Higgins, 2009) which suggests mixing of languages can lead to double-voice that involves parody, word play and so on. It is also related to the notion of "recontextualization" (e.g., Androutsopoulos, 2010) which theorizes the appropriation and re-embedding of text when adopted in a new context. I theorize the current study in terms of heteroglossia as it provides a more holistic perspective, and specifically discusses the creativity and playfulness of "carnivalesque" communication. The findings demonstrate the nature of Chinese online communication as heteroglossic, dialogic, and contextualized.

Online Communication as Heteroglossic

The study reveals the heteroglossic nature of online communication in China. Bakhtin (1981) defines heteroglossia as the coexistence and ever-changing ways communicative resources of language(s) are adopted and utilized by individuals. The speech produced by individuals also change the meanings according to different physical, social and historical contexts. This notion of heteroglossic communication is focused on language-in-use, which is contrasted with the traditional formalist view of language(s) as abstract concepts and systems pertain to specific standards and ideologies.

The findings exhibit the thriving "non-standard" literacy practices adopted by Chinese online users. The language uses under investigation involve various semiotic resources from different languages and other meaning making signs facilitated by CMC affordances of Weibo

and bilibili.com. The users adopt these resources to construct their unique communicative styles which are substantially different from the standardized linguistic structures and conventions of Chinese Mandarin and other foreign languages. At the same time, while various features were adopted from languages other than Chinese, the meanings from the original sources are often shifted according to individual uses and contexts. In other words, users do not simply "borrow" expressions from other languages, but they "adopt" and "adapt" features of other languages to their localized online communication. Many expressions that were foreign to the Chinese users are adopted with new interpretations and functions through practices such as transliterations, code-mixing, and so forth. Bakhtin (1981) also theorizes these practices as "refraction" of meanings as another's speech is expressed in another's language with new meanings and new understandings. In addition, the comparison between literacy practices of Weibo and bilibili.com indicates the important role of CMC affordances in the different adaptations of semiotic resources. The heteroglossic communication is also compatible with the notion of translocalization of meaning making signs in a superdiverse and internet-connected world (Blommaert, 2010), as linguistic and other meaning making resources are susceptible to change through different contextualizations. This notion of heteroglossic online communication is in contrast with the monolithic view of language(s) as static and abstract linguistic concept which tends to treat language uses as structural and ideological. Online communication, on the other hand, provides space for heteroglossic communication that facilitate and encourage "nonstandard" literacy practices in pursuit of creativity and playfulness.

Online Communication as Dialogic

The study reveals Chinese online communication as dialogic as well. Dialogism, also referred to as double-voicing or polyphony, suggests that each utterance is produced with

multiple voices exploited by individual speakers through various accentuation, styles, registers and genres, and our expressions construct an ongoing chain of multi-authored interactions through which new statements respond to presupposed previous statements and possible future responses (Bakhtin, 1984). This dialogic nature is especially prominent in the online interactions observed in the micro-blogging site and video-sharing site investigated in the current study.

The literacy practices in the micro-blogging site, Weibo and video-sharing site, bilibili.com reflect the multi-authorship of online communication. The comments from both CMC sites are constructed by multiple users which form the multi-authored and user-generated online content. Similar to Twitter (see Gillen & Merchant, 2013), comments on Weibo become part of a discursive web of utterances that not only address the target posts and/or previous comments, but also anticipate possible future responses. Users of Weibo adopt the CMC affordances similar to Twitter, such as functions to tag other users by using "@" or topics/events by using "#". For each Weibo comment, the message possesses the potential of double-voicing as it connects presupposed comments and possible future responses. On the other hand, bilibili.com extends the multi-authored utterances to another level, as users can not only comment through the text-box system, but also above the ongoing videos that resembles collaborative annotations (Howard, 2012). Through the "bullet curtain" commentary system, the multi-authored comments can be synchronized with the ongoing video content, creating a unique style of online interactions. In these comments, the discursive web of multi-authorship is conventionalized and visualized without CMC facilitation of "@" and/or "#" that are commonly observed in micro-blogging sites, or the traditional conversation floors in text-box comments observed in discussion forums. On the contrary, the lack of CMC facilitation for interactive

conversations may have in turn encouraged other methods, such as the use of emojis, to connect users and their comments.

The study also demonstrates double-voicing as users of both target CMC sites display their multiple voices via a variety of literacy practices. Online users often adopt various linguistic and other semiotic resources in their own stylization of online communication in order to make their writing playful, humorous and/or decorative (Gao, 2007; Herring, 2016). These practices often involve multiple different types of semiotic resources including linguistic codes, sounds, graphic representations, written scripts, and other non-linguistic meaning making signs. These resources utilized in individuals' utterances are not the users' own speech, but adopted from other genres, stylizations, languages, and so on (e.g., adoptions of meaning making signs from the Japanese ACG communities). Through double-voicing, users characterize their individual speech with multiple voices as their own stylization, accentuation, among others.

Online Communication as Contextualized

The notion of heteroglossia also suggests that the meanings of utterances are situated and contextualized as people attend to not only the immediate addressee - the listener, but also a third authority as the "super-addressee" (Bakhtin, 1986). This "super-addressee" plays an evaluative role that grants the acceptability of produced utterances under various ideologies, pragmatic rules and so forth. In the online communication explored in this study, users of the micro-blogging and video-sharing sites exhibit their ability to interact with the immediate other users and/or online content, as well as the situated sociolinguistic and pragmatic contexts.

While Weibo and bilibili.com offer various CMC affordances for interactions in relation to online content and other users, the users also attend to the larger multilinguistic, multisemiotic, and multimodal contexts of online communication. The literacy practices and users'

choices of linguistic and other semiotic features are meaningful instead of random. These stylized literacy practices not only present users' decorative and playful orientation of online communication, but also reflect their consideration of input efficiency and indirect speech. While Chinese users are acquainted with an increasing amount of meaning making resources due to the globalized world and interactions online, they adopt and "domesticate" these resources according to related sociocultural conventions. The study reveals that Chinese users are aware of the rules and norms embedded in the non-standard literacy practices to make their messages meaningful and decorative despite of the lack of official codification. Although from the scope of this study, it is unknown about whether these online users have the knowledge of the historical meanings and origins of the identified literacy practices, they nevertheless demonstrate their understanding of the conventionalized and stylized meanings and communicative functions while utilizing these practices.

The online users' awareness and adaptation of the macro online context discussed above offer opportunities for popularization of creative online conventions. Within the larger communicative context that includes language practices with multilingual features and non-linguistic semiotic resources, a competent online user is able to stylize his/her own adaptations of these online conventions as situated communicative practices. Different from offline communication, the internet is often less constrained by geographical boundaries and provides multiple channels for the spread of semiotic resources and creative literacy practices. Online users are often sensitive towards these new meanings and/or literacy practice styles, and are able to adopt them into their online communication effectively.

Online Communication as Creative and Playful

The study shows the complex and dynamic Chinese online communication that reflects the creative and playful nature of online communication. The users of Weibo and bilibili.com adopt various meaning making signs to stylize their online communication often with the intention of being playful or expressing "cuteness". Bakhtin (1981; 1984) characterizes these practices as playful and "carnivalesque" language use through which people seek freedom of expressions and desire of pleasure. Some of the "carnivalesque" literacy practices include various playful stylization of sexual and taboo content, which manifest the "carnival" and "grotesque" orientations of language-in-use.

Bakhtin (1981) suggests that people tend to characterize their speech as playful and creative. The language-in-use is often ludic as people stylize their speech with accents, registers, genres, among others. These practices eventually contribute to the notion of "carnival" (Bakhtin, 1984) which includes various stylization and coloration of speech in communication through which people seek for enjoyment, humor, and ultimately freedom. The findings from both Weibo and bilibili.com reflect this notion of "carnival" as users adopt diverse linguistic features, sociocultural concepts, and other meaning making signs to decorate their posts and comments. In many cases, a single message may contain multiple styles, accents, and other individualizations. These practices result in various decorative, playful, and humorous expressions, and construct a "carnivalesque" ecology of online communication.

The findings also reflect the "grotesque" inclination (Bakhtin, 1984) of online communication as users often stylize their discourse with sexual and vulgar content. Previous studies (e.g., Chen, 2014; Wang et al., 2016) have found out that taboo expressions and cursing are not uncommon in the stylizations of Chinese online communication. The online context

provides space and CMC accommodations for these stylizations, and users also apply various strategies, such as pinyin acronyms (Chen, 2014), to express vulgar terms with softened tones. The users of Weibo and bilibili.com also exploit sexual content and vulgarity to stylize their posts and comments. These practices include Romanization of characters and adoptions of nonstandard writing for cursing and private organs through resembling sounds or actions in textual or video content in relation to sexual or vulgar activities. At the same time, these practices are accompanied with the communicative strategies of avoiding and subverting toward authorities and control to pursue freedom. This subversive style of literacy practices is compatible with the recent research on the spoofing culture in Chinese online communication (e.g., Davis & Chey, 2013; Gong & Yang, 2010) which indicate that Chinese online users often play with Chinese characters and trendy cultural phenomena that form an "e'gao" (spoofing) culture. Online users utilize various linguistic and other meaning making features, such as Romanized letters, foreign language expressions, Chinese pinyin and radicals to avoid online censorship of taboo expressions related to sexual and cursing content (see also Wang et al, 2016). These "spoofing" practices are often ironic and ludicrous in nature, and provide space for Chinese "netizens" to express criticism and emotions. Interestingly, it is found that some literacy practices that involve sexual and vulgar content which would not have been censored are nevertheless stylized to conceal the original written forms. This phenomenon may be resulted from concerns of appropriateness in using "grotesque" expressions, so that various strategies of stylization are adopted to soften the tones (e.g., Chen, 2014). It is also possible that the long existing governmental censorship may have facilitated this trend of stylization.

Finally, a particular feature of playful literacy practices in Chinese online communication is the notion of "being cute" or expressions of "cuteness" (de Seta, 2014). Strategies such as

transliterations of Japanese ACG cultures of cute expressions (e.g., using "萌" to describe cute things) and non-standard written forms of Chinese characters are adopted to construct "cute" images of online content and users. The literacy practices explored in this study demonstrate the Chinese online users' pursuit of enjoyment and humor, which are facilitated by CMC that provide space for multilingual, multi-semiotic, and multi-modal expressions.

Many of the literacy practices identified in Weibo and bilibili.com reflect the "carnivalesque" communicative ecology of Chinese online communication. With a variety of accessible meaning making resources, the Chinese online users are able to create and play with various online communication mediums such as online posts/comments and videos. While "grotesque" expressions are often adopted, the users tend to stylize them with various communicative strategies to either soften the tones or avoid censorship.

Conclusions

The current study investigates the creative and playful literacy practices adopted by Chinese online users, and captures the communicative online ecology and linguistic landscape of mainland China. Adopting a screen-based research approach, the study describes and analyzes the various types of non-standard literacy practices adopted by Chinese online users. The findings demonstrate complex meaning making repertoires (linguistic and non-linguistic) of Chinese online users, and their heteroglossic communication through various multilingual, multisemiotic, and multi-modal literacy practices.

The current study explores the linguistic landscape and the meaning making strategies of Chinese online communication. The findings indicate that features of Chinese languages, such as written and spoken forms of Chinese Mandarin and Chinese regional dialects as well as the

Chinese pinyin, remain a major source of meaning making in online communication. Adopting these features, users of Weibo and bilibili.com were able to facilitate, stylize and play with their posts and comments, while projecting images of playfulness and "cuteness". Certain features of Chinese languages (e.g., pinyin initials) were also adopted to avoid potential online censorship. In addition, Chinese characters as a logographic writing system also contribute to some typthographic practices in relation to Chinese languages identified in the study, such as the use of Chinese radicals. The non-standard literacy practices involving Chinese languages reflect Chinese online users' awareness of the typthographic features of Chinese writing and speaking, which fueled creative and playful language use. This finding is significant as it showcases the complexity of Chinese languages/dialects, and the creative appropriations of spoken and written Chinese features in Chinese users' online communication. It is also evident that Chinese users often do not necessarily have to be "multilingual" in the sense of knowing one or more foreign languages (e.g., English) to creatively construct their online literacy practices; Chinese itself (and its various dialects) as a complex semiotic resource with various usable features is frequently appropriated for heteroglossic online communication.

The investigated literacy practices also reflect Chinese online users' practical knowledge and effective usage of features in some foreign languages. Users of Weibo and bilibili.com adopt various strategies, including direct borrowing, code-mixing, code-meshing, reinventions of foreign texts. The foreign languages observed in the study are largely adopted on a phrasal level, and are often accompanied with other languages or non-linguistic signs. Chinese online users also "domesticate" various foreign expressions through transliterations and reinventions of meanings. Moreover, certain literacy practices such as code-meshing and utilization of capitalization for Chinese characters also demonstrate online users' metalinguistic awareness of

foreign language features. These findings echo the notion of pluralingualism which treats people's knowledge of languages as a whole, and that languages should be considered in terms of repertories instead of separate entities pertain to the concerns of proficiency levels (Garcia, 2009; Garcia & Li, 2014). Although the study does not provide information of the users' full linguistic background, it is reasonable to speculate that many users who produced multilingual texts may not have been a multilingual in the sense of "knowing" a language for daily spoken or written communication, especially for Japanese and Korean which have not been widely adopted in foreign language education in mainland China. Nevertheless, users can still communicate using features and phrasal expressions of foreign languages in their online discourse. This is also partly due to the increasing influence of youth and pop cultures from Japan and Korea in recent years which bring along features of Japanese and Korean, later utilized by Chinese online users.

The study also exhibits the substantial role of non-linguistic meaning making signs in online communication. The findings demonstrate the important communicative roles of emojis and kaomojis in Weibo and bilibili.com. Chinese online users adopt these meaning making signs individually or in combination with texts to comment at online content or to other users. Online users are adapted to the different CMC affordances of Weibo and bilibili.com which have led to the different preferences between emojis and kaomojis. In addition to the awareness of CMC affordances, different online communities may have also resulted in the choices of emojis and kaomojis. Specifically for bilibili.com, users adopt more kaomojis due to the website's connections to Japanese ACG culture and many active users who are familiar with Japanese languages and culture. On the other hand, compared with western emoticons, the emojis and kaomojis identified in the study often contain complex layers of expressions and meanings. They can be used to not only demonstrate users' emotions, but also describe objects, facial expressions,

parts of a body, and/or actions. These semiotic signs further enrich Chinese online users' selfexpression and meaning making repertoires. In addition, scholars with interests in online communication also refer these practices as "multiliteracies" in the information age (e.g., Bodomo & Lee, 2001; Lam, 2009). This view suggests that technology has brought upon the multiplicity of literacy which reflect social and economic change. New forms of literacies, stimulated by communication through the internet, computers and multimedia, should be noted in a world with an increasing influence of digital communication. These new forms of literacies are evidently demonstrated in the findings of the current study which contain multiple types of online literacy practices beyond traditional written text.

Furthermore, the literacy practices identified in Weibo and bilibili.com demonstrate the heteroglossic nature of online communication and the complex and hybrid linguistic and other semiotic repertoires of Chinese online users. Users of the two target CMC sites adopt various language features from the spoken and written languages of Chinese (Mandarin and other dialects) and foreign languages (i.e., English, Japanese and Korean), as well as other meaning making signs facilitated by CMC affordances (e.g., kaomojis) and sociocultural knowledge (e.g., Japanese ACG culture) to facilitate and decorate their online discourse. As the users make their own renditions of these resources to stylize online communication, they exhibit characteristics of heteroglossic communication as the speech of the others are incorporated and individualized in their own discourse. In addition, the CMC facilitation of both Weibo and bilibili.com offers space for user-generated online contents which are often multi-voiced from different authors. Online users observed in this study actively adopted CMC affordances to interact with online content and other online users which reflect a dialogic communication. The internet also

provides space for creative and playful literacy practices that contribute to a "carnivalesque feast" of heteroglossic communication with multiple voices and stylization at play spontaneously.

Moreover, the centrifugal reality of heteroglossia and multiliteracies demonstrated in the current study is also in sharp contrast with the current Chinese Mandarin (i.e., Putonghua) and foreign language policies (Zhou & Sun, 2006) enforced by the Chinese government which represents the centripetal force. Despite governmental effort in promoting Mandarin and regulating foreign languages with a focus on standardization, regional dialects such as Cantonese and adoptions of foreign language features are frequently practiced by Chinese online users, often in playful and non-standard ways. CMC seems to provide flexible and encouraging space for users to engage in literacy practices that are deviant and/or subversive to the authoritative voice, which in essence reflects the "carnivalesque" communication (Bakhtin, 1984). These literacy practices also counter the deficit view on languages which claims that language use that departs from a "standard" structure, often ideologically defined, is deficient (García, 2009). On the contrary, the non-standard literacy practices investigated in the current study exhibits Chinese users' ability to construct literacy practices with multi-layered meanings and remarkable creativity, which usually involve appropriations of various languages features, non-linguistic meaning making signs and knowledge of different online communities.

Finally, it is worth mentioning the importance of necessary qualifications of researchers to conduct multilingual and multimodal online communication research in a modern, digital world. In order to comprehend the complex and hybrid online communication in CMC space such as Weibo and bilibili.com, a researcher needs to understand not only the "languages" (e.g., Chinese Mandarin, English, Japanese and Korean), but also possess relevant cultural knowledge and digital literacy which include understandings of popular culture and expressions adopted by

various target online communities. For instance, in the current study, being able to understand Chinese, English, Japanese and Koreans as languages is not sufficient enough to understand and/or explain the multi-layered literacy practices in the two target sites. The researcher also has to be familiar with the knowledge of the target online community and community-related literacy practices related to youth culture and popular online conventions (e.g., expressions from Japanese anime). In other words, the research himself/herself should possess an advanced competence in multiple literacies in order to conduct CMC research in a modern digital world.

Limitations and Directions for Future Research

This study is exploratory in terms of the research context of Chinese online communication. The findings provide a glimpse view of the heteroglossic and hybrid communication of Chinese online users. In addition, by revealing the heterolgossic, plurilingual, creative and playful online literacy practices of Chinese users, the study also contributes to potential future researches of CMC by users of other sociolinguistic backgrounds and/or social media. Nevertheless, there are some limitations of the study which may provide opportunities for future research of Chinese CMC.

Besides the fact that I am an insider of the CMC spaces and the identified non-standard literacy practices, the screen-based approach adopted by the study lacks the emic perspectives of the actual users of Weibo and bilibili.com. The role of the researcher was that of an observer who documents and analyses the literacy practices, and there were no interactions between the researcher and the researched (Androutsopoulos, 2008). As a result, details about the online users' sociocultural and linguistic histories are unknown. Furthermore, a screen-based research is limited in understanding and interpreting the users' motivations and awareness of linguistic and

semiotic resources. For future research on Chinese CMC, a user-based approach can be adopted to perhaps compliment the screen-based approach. Individual users of CMC sites could be contacted in forms of interviews and questionnaires regarding their linguistic and cultural knowledge, as well as their motivations of "non-standard" literacy practice. In this way, future researchers may be able to understand the online users' full linguistic repertories and even connect their online communication with their offline activities, which is another important aspect in terms of the examination of literacy practices. It is also beneficial to adopt a user-based approach in order to interpret data from both the researcher and the actors of discourse practices themselves.

Furthermore, the current study only investigates two CMC sites from China. Although the two sites are very popular among Chinese users, there are other CMC sites that share similar levels of popularity, such as Taobao (淘宝 - a shopping website similar to eBay) and Douban (豆 辦 - an online movie review forum similar to Rotten Tomatoes). In addition, there has been a growing trend of mobile communication with the development of online technologies. Smart phones, tablets, and other portable devices have become one of the main platforms for online communication. There is a significant research gap in studying the discourse practices on mobile communication applications of Chinese users. In 2012, the number of online users who access the Internet through mobile phones (388 million) has surpassed that of desktop computers (380 million) for the first time (CNNIC, 2012, July). Mobile phones have now become the most popular Internet platforms in China. However, the semiotic resources, and discourse strategies of Chinese mobile communication applications are seldom researched, let alone comparing those with the uses of desktop computer-mediated discourse practices. Social networking applications, such as the instant-chatting application WeChat (微信) which has over 396 million user

population (Tencent, n.d.b) by March 2014, are becoming the dominant communicative methods. The current study, though only focuses on desktop-based CMC, will lay a foundation for future research on mobile applications. It is worth pointing out that data collection on mobile devices poses greater challenge for CMC research in terms of protection of user privacy and anonymity; therefore, the data collection strategy will have to be reconsidered for this type of research. Future research on CMC should take account of these new trends which continue to shape and reshape the linguistic and ultimately communicative context of Chinese online communication.

Finally, the current study is not able to provide insights in comparing uses of semiotic resources and discourse strategies in terms of demographics, which is another potential research direction for sociolinguistic studies. As many CMC studies are conducted with younger generations (e.g., Chen, 2014; Yang, 2007), it is unclear about the pervasiveness of the target discourse practices of online semiotic resources and communicative strategies. For future research, this issue can be addressed in two ways. First, if the researcher has more accessibility with the target participants, it is possible to obtain more detailed and in-depth ethnographic information of each participant (e.g., conducting interviews with Chinese online users). For instance, conducting an ethnographic multiple-case study can provide a more emic perspective on the user motivation and conceptualization of their own linguistic and semiotic resources and practices through data collection methods such as face-to-face and/or online interviews. Another option is to adopt a purposeful sampling method for participants of various age groups, so that the researcher can compare and contrast each group's online communication strategies. Both strands are promising for future research on Chinese online literacy practices.

In conclusion, this exploratory study may have raised more research questions than those that are answered. It has offered a brief review of creative online literacy practices from two

popular CMC sites among Chinese online users. The study demonstrates the heterglossic nature of Chinese CMC, and the multilingual and multi-semiotic repertories of Chinese online users. In these notes, CMC in China still holds great research potentials and awaits for more future research inquiries.

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