“Across Time and Space, I Am Together with Many, Many Others”: Digital Writing and Temporality on Chinese Social Media

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Abstract

Current scholarship tends to see temporality as a problem or challenge to be overcome in communication on social media (as in “context collapse” and “time collapse”). Drawing on in-depth interviews of Chinese users of a digital writing function (bullet comments) on a major video-sharing platform, we aim to expand current research and deepen understandings of temporality and digital writing. We offer a broader, more positive conceptualization of time on social media by highlighting an alternative set of time-related practices and experiences, mediated by bullet comments. Following recent studies of individuals’ making and experiencing of time in media-saturated societies, our article investigates Chinese social media users’ diverse time-sensitive practices and multi-dimensional temporal experiences. We outline their creative practices from the bottom up, which make use of the distinct technological design of bullet comments. Four interrelated themes in their temporal experiences are analyzed and the similarities and differences with the Deleuzian concept of “crystal of time” explained. Overall, we demonstrate the semiotic power of digital writing in facilitating new meaning-making practices, producing multi-layered mediated temporalities, and affording multisensory, enriching, bonding experiences. The significance and implications of this study for future studies are discussed, in view of the expansion of bullet comments to Chinese mainstream, commercial platforms.

Keywords
digital writing, video, social media, bullet comments (danmaku), temporality, Bilibili

Introduction

Due to its transformative power in connecting individuals and building new virtual spaces for diverse communities, social media is theorized to be essentially different from the offline world in many scholars’ research. In particular, they point out that the collapsed contexts pose challenges to social media users, who in turn need to adapt to new online situations in networked communities (Marwick & Boyd, 2011, 2014; Papacharissi, 2012; Vitak, 2012; Wesch, 2009). For example, spatially distant users can be simultaneously the audiences for one’s message, post, or other self-performance on social media—the consequence being individuals face unprecedented difficulties to meet the expectations of multiple and diverse audiences (Marwick & Boyd, 2011). To complement the currently dominant “spatial” focus, recent studies have sought to expand the notion of “context collapse” by including the “temporal” dimension, another important aspect of online communication (Ayalon & Toch, 2017; Kaun & Stierstetd, 2014; Xu et al., 2016). For example, Brandtzaeg and Lüders (2018), based on their study of the timeline feature on Facebook, proposes the notion of “time collapse” to theorize the collapse of the boundary between past and present on social media, which “impairs the sense of linear time” (p. 8).

Drawing on in-depth interviews of Chinese social media users, our study aims to contribute to this growing body of
research about time and communication on social media. We
will discuss users’ diverse practices and complex temporal
experiences afforded by the digital writing function of bullet
comments (弹幕, danmu). This function allows users’ com-
ments to be instantaneously published (anonymously) on the
screen of the video and become an integral part of it; it also
plays all past comments, every time the video is played. On
the surface, communication via bullet comments represents
the archetype of “context collapse” and “time collapse.”
However, despite these seeming features, we aim to demon-
strate the powerful semiotic functions afforded by bullet
comments, and users’ diverse adaptive and creative practices
in navigating the new technological environment.

We hope to broaden the scope of current studies, which tend
to focus on western mainstream social networking sites. This
focus, as we will argue, may have been responsible for a rela-
tively narrow conceptualization of temporality due to the nature
of such platforms (see critique in Wexler et al., 2018). They are
primarily concerned with the challenges of collapsed temporal-
ity for self-presentation, online image management, identity,
and privacy in networked communities, while other issues
related to time cannot be fruitfully addressed. In this study, we
foreground another type of networked community consisting
of anonymous users on video-sharing platforms, which so far
has received only scant attention in media and communication
studies. Video-sharing platforms have rapidly grown to be one
of the most dynamic, profitable, and lively spaces on Chinese
social media and beyond (with new additions including Douyin
and Kuaishou). This focus will allow us to explore an alterna-
tive set of temporal experiences. We will highlight the “con-
structive” instead of “challenging” aspects of temporality,
using the example of bullet comments: the unique design of the
assemblage of “video plus bullet comments” affords multiple
creative practices, increases multimodal information value, and
produces novel networked experiences.

Another theoretical contribution we hope to make is to ex-
 pand current studies on writing and multimodality in social
semiotics and sociolinguistics (Lillis, 2013; Thurlow et al.,
2020; Van Leeuwen, 2008). We will demonstrate that tempo-
rality is essential to the meaning-making potential of digital
writing: it is more than one of the modes, but should be seen
as crucial to the situated individual meaning-making prac-
tices involving multimodal resources. As Rodney Jones
(2020) emphasizes,

[analysts should] engage more fully with the ways multimodal
meaning emerges not from “signs” per se, but from technolo-
gies, which the most important communicative resource is not what is visible but communicators’ embodied experiences of engaging with new communicative
resource. (p. 20)

We seek to show the importance of temporal dimensions in
understanding social media users’ meaning-making practices
and embodied experiences.

In what follows, we will first contextualize digital writing
and temporality based on existing scholarship, emphasizing
the theoretical focus on users’ situated, mediated “making”
and “experiencing” of time. Second, we will discuss the
function of bullet comments, its technological design and
potential of affording new temporal experiences. Following
that, we will introduce the research design and data collec-
tion methods. The main part of the article will be devoted to
an in-depth analysis of the findings of ethnographical inter-
views to showcase the range, features, and diversity of users’
practices and temporal experiences. We will then summarize
and theorize the findings, as well as discuss directions for
future research.

**Writing, Temporality, and Users’ Practices**

Traditionally, speech and writing tended to be conceptualized
as a dichotomy in philosophy and communication studies. In
terms of temporal features, speech is seen as temporary, while
writing permanent. Interrelatedly, speech is theorized to be
multimodal and situated, while writing is monomodal and
textless (see Lillis, 2013). Representative ideas of such
dichotomy can be found in the Toronto school of communica-
tion, which postulates an autonomous status for the written
form, regarded as having an invariant signification while
speech is seen to be embodied in concrete contexts (see Innis,
1951; McLuhan, 1962). It is also presumed that writing pro-
duces visually dominant cultures, while speech affords orality
cultures (Innis, 1951; McLuhan, 1962). Interestingly, Marshal
McLuhan (1962) recognizes the effects of electrical media in
producing new orality elements, which do not always involve
face-to-face speech. To follow this line of thought, it is evi-
dent that the development of digital technologies has further
unsettled the speech-writing dichotomy: digital writing is
now often simultaneous, multimodal, and transitory, while
speech can be permanently stored. As pointed out in recent
studies, digital writing on social media tends to produce new
orality features in networked communication, such as the use
of spoken language, formulaic expressions, and emoji
(MacNeil, 2007; Stewart, 2016). From a different tradition,
Roy Harris (2000), the founder of integrationalism, also
underlines the effects of technologies in creating new forms
of writing and speech. He accentuates the role of individuals
in integrating writing and speech in situated (online) activi-
ties: for him, both modes “can be integrated on the basis of
time, since the temporal dimension is one they both share”
(Harris, 2009, p. 57).

In sociological and media studies, there is a shift of focus
from macro-sociological accounts to social actors’ situated,
heterogeneous practices and “the range of experiences of time
that are supported in a media-saturated culture” (see Keightley,
2013, p. 55). For example, many studies turn to look at the
ways that social actors utilize and integrate specific media
technologies in their daily practices and examine “the multiple, diverse and competing temporalities of everyday life” (see Barassi, 2015; Burchell, 2015; Kaun, 2016). Bakardjieva (2006), drawing on observations of individuals’ multiple uses of the internet in domestic spaces, demonstrates that the experience of mediated time does not depend solely on the design of a technology but also on the contextual and situated ways people use them. As Keightley (2013) shows, media can be organized and used in heterogeneous ways, “supporting and facilitating particular experiences of time,” according to differing social and cultural context (p. 61). The latest special issue on time and media re-emphasizes the plurality of mediated social temporalities (Lohmeier et al., 2020). Instead of seeing time as external or background to human practices mediated with technologies, these new studies treat time as “made, managed and experienced through them” (see also Coleman, 2020).

Informed by these user-centered perspectives, in this article we will investigate how users, via digital writing functions, create, make use of, and experience multi-layered temporalities in their online practices.

**Bullet Comments, Design Features, and Temporality**

We will briefly discuss the digital writing application of bullet comments on Bilibili, a leading video-sharing platform in China launched around 2010. Bilibili was one of the first websites to adopt this application from Japanese internet culture and has successfully made it a signature function. As we will show, the case of Bilibili serves as an example to illustrate the role of bullet comments in shaping users’ reading and writing practices, and their potential affordances in reorganizing temporality and changing users’ temporal experiences.

As a breeding ground for various online subcultural communities in ACG (animation, comic, games), Bilibili is now increasingly diversified beyond these subcultures. Registered members on Bilibili can type comments while watching videos, which then appear in anonymized form on the moving screen, becoming an integral part of the video for all users. The function accumulates all past comments and plays them synchronously with the video (see Figure 1). The distinct design of bullet comments affords simultaneous video-watching and reading experiences, synchronous chatting functions, and engagement with past comments. The most striking features are the materiality and temporality of the assemblage: the video and comments produced at different times are materialized on the same screen and played co-temporaneously. Recent studies observe that these design features create and reinforce an experience of co-viewing and live chatting among the audiences (Chen et al., 2017; J. Li, 2017; Yang, 2020), while others point out the “pseudosynchronicity” and “virtual liveness” of the temporality afforded in bullet comments (Johnson, 2013; Ouyang & Zhao, 2016). However, what these studies did not address is actual users’ time-related practices and experiences, a gap our study aims to fill.

With its unusual fusion of various media and senses (audio, visual, verbal, and tactile), the function of bullet comments challenges the users’ ordinary habits and experiences of online activities. As reflected from their reports, originally the function could not be turned off on Bilibili, so for many users it was “forced upon” them and were responsible for many negative experiences including challenges to
their temporal habits (e.g., “I simply cannot watch the video and take in the comments at the same time!”). Later, the website has ameliorated the application and provided a more user-friendly interface, where users can configure the settings to achieve the best viewing experience. Currently, users can adjust the speed, position, transparency, font size of bullet comments, set filtering level, and devise personalized censoring terms (see Figure 2). Most drastically, with a single click, they can turn the function off and with another click turn it back on. As shown from the interviews, many users have reflected upon the process of learning to tinker with the settings and achieve a balance between watching the video and reading the comments. It is therefore worth investigating how they adapt to, creatively make use of the design of bullet comments, and what kind of new temporal experiences are produced.

Users have developed a range of usages with the function of bullet comments. For example, they comment on the scene or performance, express their feelings and opinions, make in-jokes, share in-depth knowledge about a specific scene, and provide Chinese subtitles for videos in other languages (see Yang, 2020, 2021). Most importantly, they have the opportunity to become content-producers and to deconstruct the original texts (similar to fan practices and participatory culture, see Jenkins, 1992, 2006). Unsurprisingly, the quantity of bullet comments each video accumulates is often taken as a marker of its popularity and quality. Video producers and hosts are also highly aware of the multiple functions of bullet comments—in the video, they frequently encourage the audiences to respond to their questions, to vote, or to provide feedback via bullet comments. It is evident that the added function of bullet comments has made Bilibili a different space from other platforms such as YouTube in terms of semiotic resources, temporal experiences, and interactive dynamics. Due to its interactive features and strong potential in bonding the users, many commercial and state-run platforms in China have started to adopt the function recently (see Wong et al., 2021, on the interactions of the Chinese state and the internet culture). This expansion calls for a timely understanding of its features and influences, users’ experiences, and their engagement with it. In this article, we will pay special attention to users’ time-oriented practices and experiences.

Data and Methods

This article is part of an ongoing funded project of Chinese writing and draws on the data collected from 2019 to 2021 through online ethnographical observations and in-depth interviews. Considering its distinct advantages of offering a holistic and nuanced perspective for the study of online cultures and communities, especially on social media, we adopt netnography (Kozinets, 2020) as the key method in this research. As registered members of Bilibili, both authors are familiar with the platform and its dynamic community cultures. Fifty experienced users (university students) were recruited for a written interview about their practices and experiences with bullet comments. Statistics have shown that university students are a dominant group of users on Bilibili; its popularity among them is attested by the trendy characterization of Bilibili as “my university.”

Due to the Internet-based nature of the research subject, we conducted both recruitment and interview online to preserve “contextual naturalness” and most effectively engage with the informants (Kazmer & Xie, 2008; Mann & Stewart, 2002). We first contacted several Chinese university teachers, the mediators (see Kristensen & Ravn, 2015), to help us recruit potential candidates. They sent to their students via WeChat a recruitment notice (with the selection criteria of “at least three years’ experience of using Bilibili and having considerable reflections on the function of bullet comments”). Some interested students then posted the notice on their accounts to reach more potential candidates (see snowball strategy, Goodman, 2011). Combining the mediator and snowball strategies, we received inquiries from around 100 informants within a few hours. A screening process took place when the informants were further queried. We then finalized the list of interviewees consisting of 50 informants who had longer years’ experiences (on average 5 years) and showed interest in a wide range of video content.

In the interview questions, we assumed the role of “an interested outsider” who only had preliminary knowledge of bullet comments and therefore in need of firsthand
observations from the experienced users. The purpose was to downplay the effects of researchers in potentially shaping the informants’ answers due to power imbalances. We cited both popular and scholarly discussions of bullet comments to seek for their validations, opinions, and comments. We put in place several strategies to maximize the effectiveness of conducting online written interviews and ensure the quality of the collected data. For example, we encouraged them to use everyday language or the internet register if they felt more comfortable doing so. Concrete examples of videos and screenshots were requested to illustrate their answers. To generate serious reflections and substantial content, we requested at least 300 words for most questions. Each interviewee received a list of 15 open-ended questions via email and was given 1 month to complete the interview.

We carefully checked their answers and in cases of inadequate or incoherent content, we would ask for substantiation or clarification. In total, we had received 43 qualified reports, which were subsequently compiled and organized by two research assistants. The synthesized reports from all interviewees consist of 212,513 words. Considering our research topics, we focused on two main questions in analyzing the data: First, what are their time-sensitive practices? Second, what are their temporal experiences and perceptions of time? Informed by these two questions and a preliminary reading of the data, we then devised a range of fine-grained themes to capture the diversity of their practices, the texture, and quality of their experiences. The themes included posting comments based on users’ time frame or the video’s time frame, the sense of liveness, liveliness, the passing of time, and so on. Guided by these themes, we then went through several rounds of close readings of the data to extract relevant content, which was further organized into a list of subheadings. We will present and discuss the research findings in the next section.

Findings and Analysis

Part I: Users’ Time-Sensitive Writing Practices

In this part, we will discuss some notable examples in users’ writing practices, which exploit the distinct temporal affordances and features of bullet comments. These writing practices demonstrate both the rich semiotic power of bullet comments in supporting diverse time-sensitive practices and users’ creativity.

First, most interviewees underline the unique features of bullet comments which enable them to publish comments to match a specific time of the video and the generated semiotic effects. The multimodal features of the video (visuals, motion, dialogue, sound, etc.) are therefore recontextualized, expanded, and enriched with the added modality of writing, which, due to its key timing, is seamlessly integrated into the multimodal “whole” of the video. When these well-timed bullet comments are co-temporaneously played with the video, they ingeniously incorporate the audiences’ remarks into the video itself, with the effect of enriching its content. Users are highly aware of the distinct technological design of bullet comments in supporting such practices. They also demonstrate an understanding of the potential effects of such well-timed comments on the imagined audiences (Bell, 1984; Tagg & Seargeant, 2014). For example, they describe the function of bullet comments to be “showing up on the screen at the right moment,” “synchronous with the video content.” The following excerpt captures the strong humorous effects produced by such bullet comments:

There was a scene when three of Emperor Qing’s sons were having a meeting with him. The moment Emperor Qing walked past them, almost simultaneously, the three of them swayed to his direction, keeping their faces right towards him, just like three sunflowers (by way of observing a respectful ritual to the Emperor, our notes). That’s the moment when I caught sight of the phrase “向苞花” (xiangdiekui, “Dadflower,” a new coined expression derived from “sunflower” in Chinese, our notes) in the bullet comments, which I found superbly vivid and accurate, and even now it makes me laugh!

Many users also share the practices of posting bullet comments during some significant moments of the video (such as turning points, climax, and finale). They often serve to prepare the audiences for what is coming next, enhance the sense of suspense, mark the “occasion,” or invite them to collectively participate in the “big moments” of the show. The following report demonstrates the powerful, multisensory experiences afforded by such comments in animation videos:

When some animations are reaching the climax moments, bullet comments would simultaneously fill the screen with memorable lines spoken by the characters—such moments always overwhelm me. It’s like I can hear thousands of audiences recite those lines in unison. The visual content of the video is made more vivid and I get to be more emotionally involved in the show. Sometimes I feel that my heart is pounding so fast and I can’t help but cry.

Second, bullet comments serve as a real-time broadcast channel where users temporarily diverge from the video to report other events, news or content, which only have tenuous connection with the video content. Several users shared examples of commonly seen comments, such as “Wuhan, add oil!” in early 2020 when Wuhan was under lockdown—the videos where such comments were posted did not have much to do with Wuhan or the pandemic in the first place. However, as is often the case, users take advantage of the public broadcast function of bullet comments to spread positive messages. These messages are consequently engaged with by other users since they happen to capture a hot social issue or common pathos during a certain time in the society. Another
noteworthy practice is posting auspicious, celebratory bullet comments during holidays and festivals, which do not have much to do with the video itself but happen to reflect and enhance the holiday mood of the audiences. As a channel of news broadcast, bullet comments are often capable of reaching the perceptive audiences even earlier than the news outlets. This mode of real-time writing embedded in videos also allows it to more easily bypass official censorship.

Third, a series of time-related terms used in the reports illustrate the wide range of creative practices, which exploit the unique temporal affordances of bullet comments and demonstrate users’ awareness of their meta-functions. Notable examples include “打卡记录” (dakajilu, “mark my viewing of the video”), “时间戳” (shijianchuo, “time-stamp”), “考古” (kaogu, “conduct an archaeological examination”), “时空警察” (shikongjingcha, “police striding across time”), “挖坟弹幕” (wafendamu, “grave-digging bullet comments”), “时间胶囊” (shijianjiaoanang, “time capsule”). They make ample use of and reinforce the complex structure of mediated time, which overlap with various temporal layers (see J. Li, 2017; Niemeyer & Keightley, 2020). We will consider “kaogu” here as an illustration. A common phrase used is “I come here to kaogu during the year/era of xxx,” which marks the time of the comment. The term “kaogu” dramatizes the temporal distance between the time of commenting and the publishing time of the video. Users often post this phrase at the beginning of the video to underscore its “ancientness.” This term highlights, on the one hand, the “fast” Internet time (see Hassan, 2009; Rosa, 2013), when celebrities, fashion styles, trends, and fads easily become obsolete, and on the other, the advantages the current user enjoys in passing comments on past events with “retrospective wisdom” and new insights. For example, after some scandals involving celebrities came out, users would dig out old videos to post updated judgments and refreshed views, as an act of “kaogu.” While other functions on social media enable similar comments, the design of bullet comments makes it possible to directly overlay present comments on an old video, effectively accentuating the contrast. Inevitably, the “newness” of “kaogu” comments is only “temporary,” since they would often be quickly overwritten by other waves of “kaogu” comments.

Part 2: Users’ Temporal Experiences and Perceptions

Building on the discussions above, we will now consider users’ multi-dimensional temporal experiences and perceptions of time. It needs to be pointed out that, as mentioned earlier, the unusual design of bullet comments challenges users’ video-watching experiences and sense of temporality. Many of them went through initial stages of negative experiences, before gradually learning to engage with the new function. It is also evident from the reports that their new experiences both as readers and as writers produce new senses of temporality. Moreover, engaging with the function of bullet comments requires moment-to-moment decision-making and situated adjustments: for example, sometimes they need to temporarily turn it off to be more focused on the video itself, and sometimes turn it on and off to avoid distracting, low-quality messages.

In what follows, we will discuss four interrelated themes which exemplify the typical features of users’ temporal experiences and perceptions according to the interview reports. Importantly, we do not aim to write an exhaustive taxonomy of their experiences and perceptions, but rather provide notable instances, analyze salient features, as well as theorize their interconnections.

A Thickened Present. Drawing on Husserl’s (1964/2019) conception of the present as a synthesis that retains the past as the past in the present and contains the anticipation for the future in the very present as well, we coined the term “the thickened present” to capture users’ multiple temporal experiences. We also use it to highlight the enriched quality of their experiences due to the strong sense of “co-presence” with other viewers. As reflected from the interviews, the present moment of watching videos, instead of being a linearly organized temporal point in the video (when it is played without bullet comments), is thickened or enriched by bullet comments. The reason is they open up, unsettle, or deconstruct, the relatively contained time structure of videos by inserting other temporal dimensions to each “present” moment of the video (see Coleman, 2020 on the production of “the now”). Below, we will discuss two interconnected parts of this theme:

First, the thickened present from the spatial perspective: because of the “co-temporaneous” features of bullet comments, the users have reported a strong sense of being co-present with other viewers as if they were in a shared space, mediated with speech instead of writing (see also Chen et al., 2017). From the common analogies used such as “a classroom where students laugh together,” “a performance hall,” “a room full of my close friends,” we can see that the physical closeness in a shared space where the interactants hear each other talking, singing or laughing is implied. They also comment on the strong bonding effects created by these “auditory” experiences:

In some funny videos, when the screen is fully filled in by bullet comments of “哈哈哈哈哈哈哈” (hahahaha, laughter sounds), it is really “noisy,” both visually and sound-wise, it just feels like I was surrounded by friends and we were laughing together.

Reading these bullet comments makes me feel that I was singing a song together with thousands of others.

At the end of the video, bullet comments such as “If miracle had a color, it must be Chinese Red,” “This is a glorious age, as you have wished” appeared in large quantities, densely laid out one against another, over the screen—just like millions of people shouting out the same slogans from the bottom of their hearts, a truly overwhelming scene.
These comments showcase the strong orality features of bullet comments (conversational style, synchronous timing with the video, musical/auditory quality, etc.) in reinforcing the sense of physical presence and communal connection (see MacNeil, 2007; McLuhan, 1962; Ong, 1982; Stewart, 2016). As illustrated above, the comments can literally cover the whole screen since they accumulate comments made at different times of viewing by different users. For the audiences, such fully covered screens at significant moments of the video can produce a strong sense of co-presence and “hearing” simultaneously produced collective voices (see Figure 3).

Another spatial factor is bullet comments’ (default) trajectory of horizontally moving from right to left on the same screen as the video. Unlike the live comments on YouTube (appearing vertically in a separate box from the video), this distinct layout visually resembles individuals’ walking by, adding new voices to the scene before being absorbed into the group, as illustrated by the following comment:

After sending a bullet comment, I would often playback the video to check how it floats across. Seeing it blending in with other comments, I would feel that it was myself joining in with other users. This feeling would be intensified if there is interaction between my bullet comments and others, such as when I or others say “Who said xx just now? Wait!…”

The phrases “the one who said this earlier, don’t walk away,” “take me with you” are often used to position one’s comments vis-à-vis the preceding comments, showing either agreement or disagreement. What is significant here is the “techno-somatic entanglements” (Jones, 2020) of users and bullet comments, which effectively facilitate a strong sense of co-presence and embodied interaction.

Second, the thickened present from the temporal perspective: users have reported enriched viewing experiences due to the synthesis of past comments made at different times. The function of bullet comments imposes an “external” channel to the video itself by writing comments on its screen, which are played co-temporaneously with the video. Such increased temporal density and intensity during the “present” moments of the video work to expand the users’ experiences: each “present” is now co-occupied, interpenetrated, and filled up with entangled, multi-layered temporal dimensions. For example, as many users point out, at certain moments in horror movies, bullet comments, such as “前方高能” (qianfanggaoneng, “High energy ahead,” meaning “something will happen soon”) often “invade” the viewers’ present moment with (dreaded) anticipation of future events (Figure 4). Moreover, by posting a comment, users can communicate with past and future viewers who (will) insert(ed) comments around the same time point in the video. They are highly aware of these accumulative, intricate temporal features of bullet comments in generating unique viewing experiences: they report to be in communication with people situated at different times and enjoy these multi-dimensional temporal experiences. The most common perceptions concern the cross-temporal features, such as “offering companionship across time,” “a sense of time travel,” “interaction across time and space,” and “presenting diachronic comments synchronically.” The effects are characterized to be affording “wonderful,” “fascinating,” “intriguing,” “enriched” experiences and producing a “God-like” perspective.
A Sense of Transient Connection With People Across Time and Space. The second theme that emerges from users’ reports concerns the sense of transient connection with other audiences in different times and space. This dimension of their experiences is interrelated with the “thickened present” discussed above: they are two sides of the same coin. Due to the technological design of bullet comments, the other side of the viewer’s sense of co-presence with other viewers is the ever-shifting number and identity of the “present” viewers (The writers of the comments that one is reading are very likely not present). The movement of the comments, often flying across the screen from right to left until disappearing, vividly evokes the visuality of “transience.” The following examples clearly illustrate the sentiments and feelings toward the “transient” quality of bullet comments, which can nevertheless be powerful:

It is hard not to get a sense of resonance and belonging once we find bullet comments that express aptly our feelings at a specific moment during the video. It makes us feel being together and connected with others.

The number of bullet comments is so large, and they move so fast to the point that often you would quickly forget them right after scanning through. Compared with traditional comments made in a separate section below the video, bullet comments are more flexible and spontaneous, [. . .] As long as they can entertain me the instant they come into my eyes, then it’s enough.

Sending bullet comments resembles joining in a flash mob. I don’t care about the identities or stories of the audiences behind the bullet comments as long as it’s fun, kind like dancing to the same beat with strangers in a bar.

These reports elucidate the distinct transitory yet resonant experiences with other users afforded by bullet comments. As explained above, these affordances emerge from the non-linear temporal structure of bullet comments, namely, at any time users can post comments in the same time frame of the video, which are then played with that frame, effectively creating the sense of “liveness.” It should be noted that this “liveness” is inherently different from the “liveness” of other kinds of media (e.g., Scannell, 2014). It is less about the broadcasting of “live” events or happenings, but is produced through the distinct design of bullet comments, which reinforces the feeling of co-presence with other “live” audiences. To be more precise, this “liveness” is often “delayed,” considering that the comments one happens to read were very likely posted at an earlier time.

The time constraints of bullet comments also affect the length and type of comments made: they tend to be concise, spontaneous, and witty remarks instead of elaborate, substantial arguments or statements. As a result, some users express frustrations at not being able to effectively and elaborately respond to, reason with past comments like in other commenting functions (see Wu et al., 2018; Yang, 2021). However, as reflected in the reports, many of them, despite an awareness of these inadequacies, still enjoy the unique set of advantages brought by bullet comments, that is, enriching the moment-to-moment viewing experiences, creating a sense of co-presence and accompany, and producing a lively atmosphere.

Efficiency in Accessing Valuable Information and Knowledge. The third theme is about the efficiency of accessing information in bullet comments. Due to its compact design with multimodal information well-integrated with the video content on
a constantly moving screen, users are “forced” and “trained” to adjust their reading habits and speed. As a result, they are in general able to absorb information more efficiently than reading other types of comments on video-sharing platforms, as pointed out in the following report:

You can watch a video and scan its bullet comments concurrently. If you read the comments in the separate section below the video, however, you need to pause the video first. Surely everyone can see that it takes much longer reading three thousand conventional comments than scanning the same quantity of bullet comments.

The key feature here is the integration of video and comments, which enhances the multimodal video-watching experience and the informational value (see Wu et al., 2018). As mentioned earlier, bullet comments played synchronously with the video are an accumulation of past comments made at different times by different audiences, that is, the multiplicities of information and perspectives are efficiently materialized on the screen and can be taken in during a split of second. Below are some reports:

The co-temporaneous feature links the past, the present and the future, which can help us understand different views and ideas across time. On a large scale, it is like history being played out one more time. We can also quickly grasp the various views and ideas people have about the video content over time—they are indeed very good resources for studying and thinking about the society.

I think such co-temporaneous display of collective bullet comments made at different times is great to show a kaleidoscope of ideas and opinions [. . .]. Such display may intensify the clashes of different viewpoints, but it’s very helpful for me to understand the big picture. When two bullet comments get into a heated debate, for me, it’s a rewarding opportunity to gain rich information about the topic.

Contrasting or conflicting views are all kept on the screen so that viewers can gain a more comprehensive understanding of the discussion at hand. In a certain way, the moving screen dotted with bullet comments is like a book with fast-moving pages. Although users can adjust the speed of bullet comments, they seldom report changing the speed on a frequent basis: once they are able to adapt to a certain speed, they would keep that optimal setting (the range is between 60 and 100 mm/s). Therefore, the constant speed at which such “pages” are turned is also an important factor in “training” them to maintain a relatively high reading speed. Furthermore, since bullet comments are superimposed on the screen, readers can easily access the kinds of technical information which serve to explain a difficult or confusing point in the video, without the need of switching to a separate comment section. For example, in videos of online courses, other viewers’ explanations, notes, and examples are directly “written” at the moments when most viewers have difficulties understanding the content, and they are often set to be centralized on the screen. Another factor contributing to bullet comments’ value is their producers. Being a follower or fan, especially in subcultural groups, they often have deep understandings and intimate knowledge of the video content. Hence, the information provided tends to contain insiders’ knowledge couched in trendy language. Otherwise not available to the audiences, this kind of contextual, local knowledge has unique values, as the following remarks make clear:

I prefer to turn on bullet comments in the fields that I am not familiar with, such as unfamiliar idol groups, drama series, or video uploaders, etc. They really help me to quickly get a sense of the content, context, and overall atmosphere.

New audiences can conveniently absorb the distinct discourses used by the video’s followers since bullet comments accumulate all past comments—this saves them a lot of time and effort. They can then follow the discursive practices and maintain the community culture and its reproductions.

Without any knowledge of new internet buzz words or expressions, you will miss out on the hot topics when chatting with peers, or even become outdated. But bullet comments have helped to keep me on the same page as my peers by exposing me to all these new memes and catchphrases.

A Heightened Sense of Time Lapse. The last theme we will discuss is the sense of time lapse and perception of changes on a personal and social level. Two discursive patterns regarding this theme have emerged from the reports. The first one is the writer’s perspective derived from comparing one’s own bullet comments over time, as illustrated in the following comment:

Nirvana in Fire is an excellent drama series that I am really fond of and watched seven or eight times already. Each time when I re-watched it, I would discover more details and gain more understanding. Moreover, my views on the characters have also changed with time, as reflected in the comments I made during each viewing. In this way, bullet comments help me to keep track of my own changes, when comparing my comments made at different times about the same show.

Bullet comments serve as a record of one’s thoughts and feelings with regard to certain videos during a period in one’s life. Seeing one’s earlier comments in light of later developments therefore provides an illuminating perspective to observe one’s own changes over time.

The second is the reader’s perspective derived from observing the language used, topics and thoughts expressed in bullet comments. Many interviewees have emphasized the sense of “surprisingly fast” time lapse. As noted earlier, due to spatial-temporal constraints, the language used in bullet comments tends to be conversational. More like casual
speech instead of formal writing, it is often marked by currently trending internet memes, phrases, and idioms. Moreover, users tend to draw on hot social issues, remarkable events to mark the time, or evoke shared sentiments. Bullet comments then work as a kind of social record stamped with time marks of major social events, trending memes and language. As shown below, reading those past comments marked by “outdated” language, figures, and events, one is instantly made more aware of the time lapse:

In the decade-long period since I first used bullet comments, new buzzwords emerged into our lives, quickly got outdated, and new batches rushed in.

It is fascinating to trace out the changes of the internet language (from the outdated ones to current trending ones) on a single video—I’m always moved to exclaim that “no one is using those expressions we used during that time, and what a distant memory it feels like now!”

In some videos, bullet comments mentioned names of many celebrities’ wives, old-time pop stars, stars now tainted with scandals. It is amazing to see that in such short time, the list of pop stars shifts so rapidly, one wave after another.

Similarly, other users express a strong sense of disbelief at realizing how fast time has passed (“too fast,” “was it really such a long time ago?”). These sentiments can be read as an aftereffect of the “fast” internet time mentioned earlier. However, the distinct design of bullet comments, which plays all comments on the same moving screen regardless of their publishing time, undoubtedly reinforces and magnifies the “outdatedness” of older comments. The effect is a dramatized passing of time, in an analogous way as the filming technique of “time lapse.” This heightened sense of time lapse may explain why some interviewees (in their 20s) would express the following sentiments, which do not seem to match their age and experiences:

It disturbs me a lot when things are so much changed and become unrecognizable.

Certainly, old bullet comments would give me a sense of history across time.

The most distinct feeling is that I am old now.

When I watch again the fan clip series that I was really fond of during 2015–16, [. . .], I feel a strong nostalgia for our collective memory.

The differences in past and current opinions, which are made more salient by bullet comments, also enhance the viewers’ awareness of the impact of new developments and social changes on the way people think. Below are some examples:

Reading some rather old bullet comments is really fascinating. It makes me reflect on the limitation of each age in the society. New ideas and trends come up all the time, leading to a shift of attitudes or even a complete reversal.

I keep pondering what they would think today, those who made such comments three or four years ago, given the social changes we’ve been through.

These comments show that users are sensitized to the inherent “limitations” of one’s views faced with social changes, which would certainly bring new perspectives and understandings.

Discussion and Conclusion

We have in this article analyzed users’ practices and experiences of time when interacting with the digital writing function of bullet comments. Our purpose is to offer a different understanding of time and communication on social media from existing studies. Instead of being problems or challenges to be overcome, new temporal features in digital writing, as we have tried to show, afford new video-watching experiences and meaning-making practices, generate new ways of relating to other users, accessing information, and perceiving one’s own and social changes. Instead of “getting lost” in bulletin comments seemingly characterized by “context collapse” and “time collapse,” users have proved to be capable of navigating the new technological assemblage to communicate and connect with each other. Highly aware of its unique design features, they make use of available semiotic resources to produce a range of time-sensitive practices. At the same time, these bottom-up practices facilitate distinct temporal experiences, which restructure, transform, and enrich their video-watching experiences. With increased density of information, enhanced multisensory experiences, and accumulated messages marked with past times, they seem to be at a better position to appreciate the video, to be creative and critical, as well as to absorb valuable, timely knowledge collectively contributed by numerous others. Their reports often highlight such affirmative moments of pleasure, enjoyment, appreciation, connection, and enrichment.

We have discussed four interrelated themes to capture the texture, quality and diversity of users’ mediated temporal experiences. Users are reported to experience a thickened present, a sense of transient connection with others across time and space. The information provided in bullet comments, timely and efficiently, broadens their knowledge, and refines their understanding. They also tend to experience a strong sense of time lapse due to the close juxtaposition of “old” and “new” comments. These interrelated experiences, as we have argued, are shaped by the technological design of bullet comments, as well as the aforementioned users’ creative practices. As reflected from some reports, the temporally significant design features of bullet comments also make the users more vulnerable to low-quality, irrelevant, or hateful messages. They have commented on the recent
“desubculturalization” of Bilibili, which brought large numbers of new users (previously unexposed to online subcultures) to the platform, and the lowered quality of bullet comments. In consequence, they have to resort to temporarily turning the function off, more often than before, so as not to have their video-watching experiences compromised (see H. Li, 2021).

Overall, the users’ temporal experiences exhibit characteristics similar to Gilles Deleuze’s (1985/2013) concept of “crystal of time.” This concept, building on Bergson’s (1994) work on memory, treats each present moment as a process in which the past stays in a virtual state without appearing directly in it. The present is conceptualized as being shaped into two heterogeneous directions, “one of which is launched towards the future while the other falls into the past. Time consists of this split, and it is . . . time, that we see in the crystal” (p. 84). However, we would like to highlight two significant differences. First, the Deleuzian concept places emphasis on the virtual past (memory) as foundation, while our accounts highlight users’ actual experiences of “the present.” Time exists effectively only as presents coming into being, without following a predetermined chronological causality from the past to the present and then to the future. This restructured temporal pattern certainly challenges the habits of chronological time perception, but as we have tried to show throughout the article, it also provides ample opportunities for novel meaning-making experiments and creative experiences. Second, the temporal experience presupposed in the Deleuzian account is often modeled on individuals, whose memories condense and crystallize in the present moment, whereas in our discussions, individual users’ temporal experiences are shaped by collective writing, sharing and bonding practices mediated by digital writing technologies.

Fruitful directions for future research raised by this article would be to test our findings through large-scale ethnographic studies, as well as further theorize the multi-layered temporalities afforded by bullet comments on Bilibili, taking account of the platform’s shift. The expansion of bullet comments to other mainstream, profit-driven platforms also calls for timely studies on the kinds of practices and experiences they facilitate, and meaningful comparisons with the current study. In particular, one crucial question needs to be addressed, how do they sustain (or undermine) the creative practices and enriched experiences related to temporalities?

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Notes

1. Previous publications sometimes use the Japanese term “Danmaku.” Refer to the following link for an example of bullet comments: https://www.bilibili.com/bangumi/play/ss41227?from_spmid=666.32.hotlist.0.
2. Its average monthly active users reached about 267 million in late 2021. See https://www.statista.com/statistics/1109108/bilibili-average-monthly-active-users/.
3. This also explains why the dominant group of bullet comments users tends to be those younger populations who have abundant experiences of online interactions and strong adaptive skills.
4. This study has already been approved by relevant research ethics committee at Lingnan University. Data collection has been mainly conducted by the first author. For consistency purposes, “we” is used in this section.
5. The main reasons why written interviews, instead of traditional interviews, were conducted in this project are threefold: (1) Written interviews through email increase access to geographically distant participants and participants who may not be available for a lengthy face-to-face or telephone interview. (2) Participants are given ample time to write down (and edit) the answers at their own pace, which allows for more elaborate, in-depth, and diverse content. (3) Written interviews enable them to conveniently insert links, screenshots, and examples, which are helpful to illustrate their experiences and practices with bullet comments.
6. See https://www.jiemian.com/article/6187477.html.
7. The list of questions is available upon request.
8. We are grateful for the excellent work of Yan Zihe, a Master’s student from University of Chicago, and Yang Liu, a PhD candidate at Lingnan University, Hong Kong.
9. Due to limited space, we could only select typical and notable quotations from the interviewees for analysis. All excerpts, except some key words in Chinese, are presented in English translations. Original versions are available upon request.

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