



Humour support and emotive stance in comments on Korean TV drama



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ABSTRACT

Viewers on viki.com comment on Korean television drama series *while* watching: They produce *timed comments* tied to the timecode of the audiovisual stream. Among the functions these comments have in the community, the expression of emotive stance is central. Importantly, this includes humour support encoded in a variety of linguistic and paralinguistic ways. Our study identifies a range of humour support indicators, which allow us to find comments that are responses to humour. Accordingly, our study explores how commenters make use of the affordances of the *Viki timed comment* feature to linguistically and paralinguistically encode their humorous reaction to fictional events and to previous comments. We do this both quantitatively – based on a multilingual corpus of all 320,118 timed comments that accompany five Korean dramas we randomly selected (80 episodes in total), and qualitatively based on the in-depth analysis of two episodes. What we contribute is a typology and the distribution of humour support indicators used in a novel genre of technology-mediated communication as well as insights into how the viewing community collectively does humour support. Finally, we also present the semi-automatic detection of humour support as a viable strategy to objectively identify humour-relevant scenes in Korean TV drama.

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1. Introduction

The internet more generally, and Web 2.0 more specifically have given rise to new forms of humour production, dissemination and reception. Together with communication mediated by means of ever new technological affordances, reception of traditional audiovisual media has also shifted – which includes humour uptake in formats dedicated to humour, such as film comedies and television sitcoms, as well as in humorous scenes in other genres. Our research is situated at the intersection between these two parallel developments. In investigating online comments on the streaming platform *Viki* we explore communicative practices in a novel genre of technology-mediated communication (TMC); and since these comments are written by Korean television drama (K-drama) viewers and orient towards the stream of the particular K-drama episode with which they are time-aligned, we examine at the same time an emergent form of Web 2.0 viewership.

In our previous exploration of the functions of *Viki's* timed comments (Locher and Messerli, 2020), we found that timed comments are often employed for the communication of emotive stance and the sharing of humour support in response to the content of the audiovisual artefact and other comments. Our current study starts from these findings and offers systematic

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qualitative and quantitative analyses of how *Viki* users do humour support and thus express emotive stance in timed comments, in the multimodal context of active K-drama viewing. In particular, we are interested in the following questions: What scenes and comments do users respond to and how do they linguistically and paralinguistically encode their responses to humour in language? How does the community as a whole, i.e. the sequence of all comments that accompany episodes of K-drama, behave in terms of humour support? In addition, we examine whether clusters of humour responses allow us to identify humorous scenes in K-drama videotstreams and thus to use the comments as pre-existing community humour annotation of the artefact.

The fact that timed comments are tied to the video stream does not only create a point of reference for the interactions within the community, but also leads to an effect of pseudo-synchronicity and thus the illusion of a communal viewing experience. This is so because viewers leave comments at the time of their own watching. Afterwards, these comments appear when the next viewer watches the episode. This can be a minute or five years later, but for the viewer it appears as if the comment occurs at the time of watching. For instance, during a foot race in the K-drama *You're all surrounded* (YAS), the comment-reading viewer will have seen the comments in Example 1 during the chase. We return to the same example in Section 6.2, but even without much context, the expressiveness of the comments and their orientation towards the videotstream become apparent.

(1) Timed Comments to YAS, episode 1, 04:27–04:30¹

Timecode	User	Timed Comment
04:27	Queen:	lol, what in the world is going on?
04:28	Harriette:	Omg! It's him!
04:29	Rowena:	ahahahahah they are pursuing the bad guys or competing against each other xDXD
04:30	Sadie:	LA EDAD LA JUVENTUD GANA
04:30	Lovie:	LMAO

In terms of the typical viewing situation, user-instigated streaming on *Viki* can be regarded as a predominantly individual form of engagement with an audiovisual artefact: a user watching on their device, reading subtitles and comments, and writing comments without immediate feedback. This tension between individual and communal experiences also informs the theoretical background from which we address our data. On the one hand, we are interested in how the individual makes use of the affordances of TMC to add their perception of humour to the dynamic subtitled and commented artefact. Accordingly, we start Section 2 by describing *Viki* as a social platform (2.1) and timed commenting as a particular communicative practice that creates pragmatic effects such as sharing emotive stance (2.2). On the other hand, we are interested in the sequence and clustering of humour support in the comments, which we understand firstly in terms of the literature on emotive stance (2.3) and secondly through the literature on humour and humour support (2.4). Based on this theoretical background, we then present the specific research questions our study addresses (2.5).

We outline the data and methodology in Section 3. The K-drama Time Aligned Comment Corpus (K-TACC), which consists of comments to 80 K-drama episodes, is introduced both as the data for the quantitative analysis and as the population from which the data for the two qualitative studies were sampled (3.1). The steps of our analysis incrementally build on each other and are made up of (1) manual coding for a range of comment functions, including emotive stance and humour support, in two K-drama episodes; (2) the distribution of humour support, measured by humour support indicators (HSIs, e.g. emoji, laugh particles, etc.) in the corpus; and (3) the clustering of HSIs in the same two episodes we manually annotated (3.2). We will present the results of our analysis in Sections 4–6 and will discuss them in terms of their significance for TMC practices and Web 2.0 humour in Section 7.

2. Background and literature reviews

2.1. Technology-mediated communication on *Viki*

Viki (<http://www.viki.com>) is an online streaming platform whose primary function is the distribution of Asian television series to international audiences. We understand *Viki* culturally as part of the Korean Wave (see Hong, 2014; J. Kim, 2014; Y. Kim, 2013; S. Lee, 2015), and in terms of the distribution of audiovisual media as comparable to other streaming service providers such as Netflix, Prime Video, Apple TV+, Disney Plus, or YouTube Premium. Video streams on *Viki*, including fan subtitles and timed comments, can be accessed without a subscription (at the cost of commercial interruptions), but active contribution in the form of writing forum posts or timed comments, etc. requires registration. *Viki* is first of all a commercial endeavour by the Japanese company Rakuten, which licenses television programmes, including Korean television Dramas. In our research, we exclusively focus on Korean Dramas and their viewers. *Viki* does not stream to local audiences, e.g. Korean Dramas are not made available to residents of Korea. It is thus safe to assume that the majority of its viewers are not able to understand Korean well enough to follow the episodes without some form of translation. However, it is important to note that Rakuten does not purchase or commission subtitles. Instead, *Viki* functions as a platform for fans to create their own subtitles

¹ All user names were replaced by pseudonyms and thus anonymised.

in English and other languages. As a result, the artefacts *Viki* users engage with are a hybrid of commercially-motivated professionally-produced television series and community-motivated lay subtitling.

The essential premise of *Viki* thus includes user-generated content, and it can be approached as a form of social media insofar as it is “deliberately designed to encourage and enable non-expert users to create, share and disseminate digital content” (Hoffmann, 2017: 5). The fan-generated subtitles, our initial research focus, are only one communicative practice among a range of technological affordances that allow users to participate actively on *Viki* (Locher, 2020; Locher and Messerli, 2020). The participatory culture (Jenkins et al., 2009; Burwell, 2010) of *Viki* includes asynchronous communication, such as user reviews of K-drama episodes and forum posts, as well as pseudo-synchronous *timed comments*. Timed comments are user-generated text messages that are tied to the stream of a particular episode (see Section 2.2). They are both a manifestation of active engagement by users with the streamed artefact and a form of communication among the viewer community. We start from the premise that the community-subtitled artefact serves as the main frame of reference for the practice of timed commenting.

2.2. Timed commenting as a social practice

Timed comments are written by viewers in connection with a particular episode. They are timed in the sense that their appearance onscreen – superimposed in the margins or separately next to the video – is tied to a particular moment of the video.² The result is that after the posting of a comment, every subsequent viewer will be able to read that comment as a note by another viewer on what is happening in the video at that very moment. Accordingly, Dwyer (2017: 168) regards timed comments as “viewer notes” that “typically focus on fashion, grooming, plot points and actors, expressing emotional reactions, fannish enthusiasm and a sense of community.” In our research, we have examined the variety of functions of timed comments more systematically and have provided further evidence for their importance in communal sense-making in particular in light of making sense of the cultural Other as portrayed in the diegetic world of K-dramas (Locher and Messerli, 2020).

Written within a browser or in a dedicated application on a mobile device, timed comments are a typical example of Technology-Mediated Communication (TMC, Chovanec and Dynel, 2015).³ While *Viki*'s timed-commenting to our knowledge has received no attention in research apart from Dwyer (2017: 168–171) and Locher and Messerli (2020), it shares many properties with *Danmaku*, a form of anonymous comments available on several Chinese and Japanese streaming sites. Judging by the existing literature (e.g. Johnson, 2013; Wu and Ito, 2014; Liu et al., 2016; Chen et al., 2017; Lin et al., 2018; Zhang and Cassany, 2019a; 2019b; Chen and Chen, 2020), *Danmaku* appears to be the flamboyant cousin of timed comments – coloured text covering part of the screen that can easily lead to information overload (Liu et al., 2016: 284). Timed comments are more subtle in contrast, but when viewers enable them, this means that in addition to the video and the subtitles, there is yet another communicative channel competing for the viewers' attention within the same platform.⁴ Cluttering of the screen, however, does not occur as only one comment at a time is shown.

Apart from their status as user-generated texts that are time-aligned with the video, timed comments and *Danmaku* also have in common that they provide the viewers with a sense of community. It is important to note, however, that the collective viewing experience users are looking for (see Chen et al., 2017: 1; Dwyer 2017: 169) is at least partly an illusion. The alignment with the video creates an effect of *pseudo-synchronicity* (Johnson, 2013: 301; see also Chen et al., 2017: 2) of seemingly contemporaneous viewing based on comments that may have been written years apart (note that there is no time stamp displayed for the individual comments). Insofar as synchronicity contributes to a sense of community, we can thus also speak of *pseudo-communal* viewing in which spatially and temporally separate individuals engage. As is the case with other forms of asynchronous TMC, multi-turn interaction is possible in timed comments. However, the placement of comments somewhere along the text time of the video-stream would seem to favour user contributions that respond to existing comments and to the artefact over those that require an immediate response. In particular, the possibility to comment while watching allows an immediate reaction to aspects of the artefact and other comments, which includes humour support and the expression of emotive stance.

Finally, it is important to consider timed commenting also as a part of the larger context of engagement by viewers with an artefact. The participation structure of this engagement is broadly that of the reception of subtitled film (Messerli, 2019), but reading previous comments and/or contributing comments while watching leads to a significant shift in viewer roles. As comment readers, viewers engage with a heterogeneous collective sender (see Dynel, 2011), manifest in a culturally and linguistically other audiovisual stream (Korean drama available to international audiences), fan subtitles that originate from an expert circle within the community and comments that suggest a co-viewing audience but are in fact traces of prior viewing experiences (Locher, 2020; Locher and Messerli, 2020). As writers, *Viki* users become themselves contributors to the artefact others will engage with. The blurring of boundaries between collective sender and recipients that is the result of this communicative setting will likely also have an effect on what users communicate in their comments, which includes emotive stance as well as humour support.

² While typing a comment, the video stream stops and resumes automatically after posting the comment. The typing time it takes to write a comment therefore does not influence where a post appears within the episode.

³ By associating timed comments with TMC, we want to emphasise that they are mediated not only through computers, but also mobile and other devices. However, we could of course also regard the comments in terms of computer-mediated, digitally mediated, electronically mediated or Internet-based communication (CMC, DMC, EMC, IBC, see Jucker and Dürscheid, 2012).

⁴ In contrast to second screen communication (see, e.g. Schirra et al., 2014 on tweeting on live television shows), the timed comments on *Viki* appear within the same platform and on the same screen.

2.3. Emotive stance

The literature on emotions is multidisciplinary and involves cognitive, psychological and linguistic accounts among others. For example, we can study what causes emotions, how these causes are appraised, what physiological changes might occur in a person in this context, what action tendencies and/or action expressions ensue and how emotions are regulated in a society (see Planalp, 1998: 11–34; Langlotz 2017: 518). Furthermore, the display of emotive stance and its interpretation draws on many cues embedded in different modalities such as facial cues, vocal cues, physiological cues, body cues, action cues and verbal cues (see Planalp 1998: 31–37; Langlotz and Locher, 2013; Locher and Jucker, 2021). For the purpose of our study of timed comments, we are concerned with the written expression of the emotive stance of the viewers with respect to what the viewers see in the video or have read in previous comments. In the latter case, the viewers react to commenters, in the former case they react to the telecinematic artefact directly. In many cases of emotional indexing (e.g. *hahaha*, *kkkk*, *jajaja*) that is not accompanied with any further linguistic clarifications as to what the trigger of the emotive stance comment is, we cannot establish with certainty whether the emotion cues are commenting on the artefact or a previous comment. Next to laugh particles, we also see the use of well-established online acronyms (e.g. *lol*, *lmfao*, *omg*, *wtf*), emoticons (e.g. XD, =) or emoji (e.g. 😂). These are all instances of emotional ‘showing’ rather than ‘describing’ (Locher and Jucker, 2021; see also Bednarek, 2008; Langlotz, 2017). Describing emotions is for example achieved with the use of lexemes that entail emotive stance such as *love*, *hate*, *funny*, *scary*, etc. or the description of physiological symptoms (*my stomach hurts [from laughing]*). It is of course possible to combine showing and describing emotive stance cues. (2) shows a compilation of timed comments that contain emotion cues.

(2) A selection of timed comments in *Meloholic* displaying emotive stance

- a) showing
AHAHAHAHAHAHAHAHA LMFAO
WWWWWWWWWWWWHHHHHHHHHHHAAAAAAAATTTTTTTT
..... -_-'
um hell no
PFFFFFTTT WHAT
- b) describing
I alreadyt dont like her
I love this drama
This is the type of couple I hate.
- c) showing and describing
dang..wish i someone did that for me lol
My stomach hurts!!!! 😂😂😂😂😂😂😂😂
ewww!!!!!! that's disgusting omg!! i can't...

The examples also show that the use of exclamation marks, bold letters and letter reduplication to indicate emphasis and emotive stance is creatively used. The linguistic conventions observed in the timed comments thus clearly draw on well-established computer-mediated strategies.

One of the important reasons to engage with fiction is the emotional involvement that can be experienced when reading or watching. Despite the fact that viewers know that an artefact is fictional, they still feel suspense, empathy, sadness, etc. (see Locher and Jucker, 2021). In a previous study on what commenters perform in their comments (Locher and Messerli, 2020), we found that sharing emotive stance is indeed the single most used code (see Section 4). This numerical finding in itself made us want to explore the use of emotive stance in the timed comments further. In addition, we wondered what role humour plays within these comments and for the community of viewers. The present paper thus builds on our previous work and explores the emotive code further in its context.

2.4. Humour support

One particular aspect of emotive stance that users express in timed comments is that they found something humorous, be it an aspect of the artefact, a previous comment, or both. We understand humour as a cognitive and emotional effect that can be approached linguistically by examining the incongruous stimuli that trigger it. Analysing these stimuli in the text would mean to follow a classic incongruity-resolution model of humour (Suls, 1972), which predicts a humorous reaction when recipients encounter a discrepancy of ideas or scripts that is resolvable, i.e. for which there is some form of satisfying explanation. In addition, we assume as a condition for humour a favourable context, i.e. a play frame (e.g. Berger, 1987; Boxer and Cortés-Conde, 1997; Coates, 2007) or joking frame (Norrick, 1996).

In the current study, we follow a different path and start from what is commonly referred to as humour support (e.g. Hay, 2001), by which we broadly mean any response to humour that indicates a positive reaction. Our data basis is the reception of humour by particular members of the audience – or rather the individual and collective written performances that ensue from this reception. As Friedman et al. (2011: 121) point out, “there is no such thing as ‘universally funny’”, which is to say that

responses to humour are to some extent individual, but at the very least depend on the social, cultural and linguistic context in which they are received (see e.g. [Turnbull, 2008](#)).

Our goal is thus not to provide insights into what was intended as humorous by the producers of any given K-drama. Instead, we first aim to understand what humour support is shared in the community. As [Hay \(2001:56\)](#) points out, humour support is not simply an automatic reaction to a humorous stimulus, but an active contribution by the audience to the construction of humorous discourse. Given the roles that viewers have within this community-oriented setting (see Section 2.2), it seems useful to also shift the focus within humour discourse to the contribution made by what initially may seem to be merely a passive response to humour proper.

For methodological reasons (see Section 3.2), our study focuses on explicit humour support, i.e. on responses that directly indicate a favourable uptake of any type of humorous stimulus. In spoken discourse, previous research identifies such responses to humour laughter (e.g. [Norrick, 1993](#); [Hay, 2001](#)), repetition and in particular echoing or savouring ([Tannen, 1989](#); [Hay, 2001](#); [Everts, 2003](#)), or the contribution of more humour ([Kotthoff, 1999](#); [Hay, 2001](#)). These strategies can be mapped to TMC insofar as online text genres are understood as *oralised written text* ([Yus, 2011: 174–175](#)), e.g. with emojis as written facial expressions and laugh particles such as “haha” as written laughter. And indeed, humour support in TMC has been found to include metacommits and language-specific humour vocabularies ([Messerli, 2016](#); [Taylor, 2009](#)), laugh particles ([Tagliamonte and Denis, 2008](#); [König, 2019](#)), acronyms (e.g. [Hübner and Bell, 2003](#)), and emoticons and emojis ([Dresner and Herring, 2010](#); [Yus, 2014](#); [König, 2019](#)). As features on the text surface, these patterns, together with novel uses of typography and/or punctuation (see e.g. [Danet, 2001](#); [Frehner, 2008](#); [Bieswanger, 2013](#)), have been regarded as typical for online or digital texts. In the context of humour response, it is important to note, however, that even when written cues resemble typical spoken responses to humour, they may be employed for different purposes ([Vandergriff, 2013](#)).

While all of the mentioned indicators have been shown to function as humour support, it is evident, however, that not all of them are equally well-defined and/or tied to humour specifically. The contribution of more humour, for instance, is hard to pinpoint, and repetition as well as emoticons and emojis serve a range of functions in communication beside humour support (e.g. [Walther and D'Addario, 2001](#); [Derk et al., 2007](#); [Yus, 2014](#); [Aull, 2019](#); [Gawne and McCulloch, 2019](#); [Sampietro, 2019](#)). This has shaped our corpus-linguistic operationalisation of humour support detection (see Section 3.2), and we thus have a stronger focus on forms of humour support whose indexicality is less ambiguous, such as particular acronyms, emojis and laugh particles. Those operationalisable instances of humour support we call humour support indicators (HSIs).

2.5. Research questions

We approach our data with the following research questions:

- (1) What role does the display of emotive stance, including humour, play within the overall commenting practice on *Viki*?
- (2) What linguistic and paralinguistic humour support indicators (HSIs) are employed by *Viki* users in timed comments?
- (3) What is the distribution of HSIs in our data and how do they cluster in individual episodes?
- (4) What is the immediate context in which clusters of humour support occur and what are their functions for the *Viki* community?

3. Data and method

3.1. Data

The data we analyse are comments from the streaming platform *Viki*. The portion of the site of interest to our study distributes episodes of Korean television drama (K-drama) to viewers outside of Korea. We have described the exact process of posting a timed comment elsewhere ([Locher and Messerli, 2020: 21](#)) and only want to highlight here (1) that once posted, timed comments are freely accessible to any subsequent viewer; (2) that timed comments remain tied to a particular moment of the video stream without any indication when the comment was added; and (3) that – given (1) and the non-sensitive nature of the data – we deem it ethically sound to subject anonymised timed comments to the analyses we conducted for this study (see [Locher and Bolander, 2019](#)).

For our research, we have compiled the K-drama Time Aligned Comment Corpus (K-TACC), which contains 320,118 timed comments, written in 80 episodes from 5 dramas ([Table 1](#)). The corpus is tokenised, lemmatised and PoS-tagged with spaCy⁵ ([Honnibal and Montani, 2020](#)) and encoded in CWB (Corpus Work Bench, [Evert and Hardie, 2011](#)). We used language detection with langdetect ([Danilk, 2020](#), which is a Python port of [Nakatani, 2014](#)) to tag the language of each comment. Languages were assigned for the five main languages if the detector calculated a probability of at least 60%. Lower confidence or other languages were tagged as ‘other/unclear’, whereas ‘no words’ was used to tag posts that produced an error because they do not contain any detectable words (see [Table 2](#)).

⁵ As language models in spaCy, we used the “core_web_sm” models for English, French, Spanish, Portuguese and German, based on the text language that we detected with langdetect. Given the status of English as the main lingua franca in the comments, we used “en_core_web_sm” as a default, i.e. if none of the other four languages was detected, the English model was used for tokenisation, lemmatisation and PoS-tagging.

Our case studies are based on the first episode of the romantic comedy *Meloholic* (2017, henceforth MH) and the first episode of the action and crime drama *You're All Surrounded* (2014, henceforth YAS). As Table 2 illustrates, the two episodes are from different genres, but received a comparable number of comments, predominantly written in English.

We included comments of all languages in our analyses of paralinguistic humour support indicators, but limited our corpus searches to English when we searched for linguistic patterns in the data (see Section 3.2). While we have no information about commenters' nationalities, we assume based on our observations of the data that English is used as a lingua franca for timed comments by native and non-native speakers.

Table 1
Overview of K-TACC.

TV dramas	Meloholic (2017), 멜로홀릭 One More Happy Ending (2016), 한번 더 해피엔딩 Twenty Again (2015), 두번째 스무살 W (2016), 더블유 You're All Surrounded (2014), 너희들은 포위됐다
Episodes	80
Comments	320,118 comments 36 languages 33,309 users 2,910,258 words
Languages	English 160,036 comments (50%) Portuguese 34,826 comments (11%) Spanish 19,057 comments (6%) German 15,724 comments (5%) French 11,148 comments (3%) Other/unclear 76,761 comments (24%) no words 6566 comments (2%)
(based on automatic language detection)	

Table 2
Subcorpus for case studies.

TV drama	<i>You're All Surrounded</i> (2014, Ep. 1) 너희들은 포위됐다	<i>Meloholic</i> (2017, Ep. 1) 멜로홀릭
Duration	59.21 min	55.24 min
# comments	3333 11 languages 1045 users 29,991 words	2586 11 languages 872 users 20,290 words
Languages	English 1841 (55%) Others 1492 (45%)	English 1557 (60%) Others 1029 (40%)

3.2. Methodology

Our starting point for the analysis is a case study on the functions of timed comments on *Viki*, which included expressions of emotive stance and humour support (Locher and Messerli, 2020). We will first revisit that study and highlight our initial observations regarding reactions to humour and other emotional responses by *Viki* users (Section 4). Expanding our focus to the entire K-TACC Corpus, we used the findings from that case study together with the insights about humour support based on our literature review (Section 2.4) to arrive at a list of humour support indicators (HSIs). This list included specific laugh particles (König, 2019; Tagliamonte and Denis, 2008), metacommments and language-specific humour vocabularies (Taylor, 2009), acronyms (Hübler and Bell, 2003), textual emoticons (Taylor, 2009) and graphic emoji (Farnia and Karimi, 2019). Using regular expressions, we broadened the range of HSIs we had gathered from the mentioned literature and from Study 1 (e.g. “haha.”* and “:-.”* to also capture “hahaha” and “:-)”).

Having thus compiled our list of HSIs, we used the K-TACC version encoded in CWB (Corpus Workbench) and CQP-syntax to find humour support patterns in the 320,118 comments we collected. As a result of our list-based approach, our findings will exclude those instances of humour support that are not sufficiently similar to our searches. This means that our methodology favours typicality over originality. The typical patterns of humour support we thus found in K-TACC are illustrated in Section 5.1, whereas their distribution is discussed in Section 5.2.

Based on the representative quantitative overview of humour support patterns provided in Section 5.2, we returned to the data we used in the aforementioned case study in order to examine the clustering of HSIs in two exemplary episodes (see Table 2 above). Taking into account both the clusters of timed comments in general, and timed comments containing HSIs in particular, we identified comment sequences particularly rich in humour support (Section 6.1). This allowed us to analyse qualitatively those moments where

the community of commenters collaboratively do humour support (Section 6.2). In addition, we instrumentalised these sequences rich in HSIs to pinpoint those scenes in the artefact itself that the community responded to. Our premise for this procedure was that just as broadcast audience laughter (i.e. a laugh track) can be used as an indicator of intended humour in sitcoms (Messerli, 2016, 2020), the naturally-occurring responses in timed comments can be used by the analyst as emic humour annotation. We understand this part of our study as a proof of concept and only offer a brief discussion of two exemplary scenes here (Section 6.3).

4. Study 1: Content analysis of timed comments in two K-drama episodes

We conducted a qualitative content analysis of all comments in the first episode of MH ($n = 2586$) and YAS ($n = 3333$) in order to better understand what commenters do in the comments they post when watching a K-drama episode on *Viki*. The code-book was developed in several cycles until coder reliability of over 75% of two independent coders for each code was achieved. We have described the 17 codes in detail in *Locher and Messerli (2020)* and can here only provide a brief overview with typical illustrations in Table 3 and show how they quantitatively distribute into three groups in Table 4. The aim of this overview is to demonstrate how the importance of the emotive stance code (which includes humour) is to be understood in relation to the other activities that commenters engage in.

Table 3

Coding overview, multiple coding possible, ordered according to likely sequence of appearance (Locher and Messerli, 2020); examples from *Meloholic*.

Artefact-oriented categories	Community-oriented categories	Artefact- and community-oriented
- Anticipation <i>Ayyyyyeee I've been waiting for this</i>	- Time/place of watching <i>09.2018 hello from Vancouver</i>	- Emotive stance (see Section 2.3)
- Genre <i>So Is this gonna be a mystery crime drama too?</i>	- Nationality <i>I'm Jamaican JM</i>	- Culture <i>Every male is required to serve in the military for 2 years</i>
- Plot <i>perp is a woman?</i>	- Number of watching experience <i>First time watching</i>	
- Intertextuality <i>He's like Charlie Brown, OMG</i>	- Knowledge of actors/groups <i>He looks like BTS Jin 😂</i>	
- Character/actor <i>He's sooo hot 😍😍😍😍</i>	- General wisdom <i>Lol this is gonna be fun girls thoughts are sometimes more savage than u think</i>	
- Diegetic technique <i>Love the sound effects</i>	- (Further) self-disclosure <i>Omg!! My birthday too!</i>	
- Criticism of artefact <i>Terrible make up and editing for that scene</i>	- Interaction with commenter <i>Hi other people watching this 😊</i>	
	- Viki (subtitles, ads, etc.) <i>The subtitles are late</i>	

Multiple coding of a timed comment was possible and frequent. For example, “*Lol this is gonna be fun girls thoughts are sometimes more savage than u think*” (Table 3) was not only coded as ‘general wisdom’ but also as ‘anticipation’, ‘plot’, and ‘emotive stance’; the examples given in Table 3 for ‘anticipation’, ‘intertextuality’, ‘character/actor’, ‘diegetic technique’, ‘criticism of artefact’, ‘knowledge of actors/groups’, ‘general wisdom’, ‘self-disclosure’, ‘interaction with commenter’ were all co-labelled with ‘emotive stance’. In fact, in MH 72 per cent and in YAS 75 per cent of all comments were coded with several functions (row 3 in Table 4). This resulted in a much larger number of codes ($n = 11,848$) than timed comments ($n = 5919$; rows 1 and 2 in Table 4).

Table 4

Emotive stance in the first episode of two K-dramas in its overall coding context.

	Meloholic		You're all surrounded		Total	
	n	% of comments (N = 2586)	n	% of comments (N = 3333)	N	% of comments (N = 5919)
<i>Distribution</i>						
1 Comments overall	2586		3333		5919	
2 Codes assigned overall	5215		6633		11,848	
3 Comments containing multiple coding	1854	72	2575	75	4429	75
<i>Functions of codes</i>						
4 Comments containing artefact-oriented codes ^a	1858	72	2284	69	4142	70
5 Comments containing community-oriented codes ^a	856	33	1248	37	2104	36
6 Comments containing artefact- and community-oriented codes: ‘culture’ and ‘emotive stance’ ^a	1849	72	2445	73	4294	73
6a Comments containing emotive stance, overall	1825	71	2397	72	4222	71
6b Comments containing single coding with emotive stance	356	14	284	9	640	11
6c Emotive stance comments with a humour aspect	587	23	746	22	1333	23
7 Remaining comments: ‘other’ and ‘unclear’ ^a	108	4	84	3	192	3

^a The percentage is based on the number of comments that contain at least one code from this group.

The codes clustered into three groups (see [Table 3](#), and rows 4 to 7 in [Table 4](#)). The first group was closely tied to the diegetic artefact and included comments on plot, genre, intertextuality, characters and actors, etc. 70 per cent of all comments contained at least one of the codes from this group ([Table 4](#), row 4). The second group was more community-rather than artefact-oriented and included codes that point to self-disclosure of the commenters. For example, commenters revealed where they are from, when/where they were when writing, that they are fans of actors/singers and interact with each other. 36 per cent of all assigned codes belonged to this group ([Table 4](#), row 5). The third group of codes could not be neatly attributed to either the artefact- or community-oriented clusters since the comments often achieved both. The two codes in this cluster were ‘culture’, which entailed all comments that point to cultural observations of the Korean culture or the commenter’s culture as well as usage of Korean borrowings as sign of orienting toward the Korean culture, and ‘emotive stance’ (73% of all comments; [Table 4](#), row 6). The type of codes and their distribution show that the viewers actively engage with the artefact itself (artefact-oriented codes) and also engage in identity-construction through sharing details about themselves and their viewing practice/experience (artefact and community-oriented codes). The cumulative effect of writing and reading these comments is community-building through the joint orientation to the practice of watching K-drama and the sharing of emotive reactions to scenes.

If we look at the individual codes, the emotive stance code of interest to this paper was used in 36 per cent of the 11,848 codes used in both dramas (not shown in [Table 4](#)). However, if we look at how many timed comments contain emotive stance, the percentage is a staggering 71 and 72 per cent (row 6a in [Table 4](#)), which makes it the single most used code overall. The second most frequently used code after ‘emotive stance’ is ‘plot’ (42% of all comments), followed by ‘interaction with other commenters’ (20% of comments), comments that displayed knowledge of actors/singers (12% of comments) and comments on the appearance or behaviour of ‘character/actor’ (11% of comments; see [Locher and Messerli, 2020](#): 28). None of the other codes occurred in more than 10% of all comments. This comparison stresses further to what extent the emotive stance code is pivotal for the practice. As mentioned before, emotional involvement is an important reason to engage with fiction in general but this distribution implies that viewers also wish to share their emotional uptake with others.

The emotive stance code frequently co-occurs with another function. However, there are also comments that are made up of an emotive stance cue entirely ([Table 4](#), row 6b; MH: 14%; YAS: 9%). These are comments that only contained an emoji, emoticon, laughter particle, etc., but also comments where an emotional reaction is clearly recognisable but it is not entirely clear what it refers to (hence there is no double coding with, say, codes from one of the other groups).

Finally, it is important to stress that the emotive stance conveyed in the comments contained many different emotions, such as surprise, disgust, love, hate, sadness, empathy, etc. (see examples in Section 2.3). However, a humorous stance clearly plays an important role, and accordingly we coded this type of emotive stance separately: 587 of the 1825 comments containing emotive stance in *Meloholic* were of a humorous type (23% of all comments, [Table 4](#), row 6c). This means that 32 per cent of all emotive stance comments contained a humorous stance. In the case of *You’re all surrounded*, we see an almost identical distribution. As a consequence, sharing a humorous stance alone is among the top two codes mentioned above. With the help of this quantification of a qualitative interpretation process, we have thus been able to validate our impressionistic understanding that sharing emotions is key for the practice of commenters on *Viki* and that humour plays a seminal role therein.

5. Study 2: Corpus analysis of K-TACC (K-drama Time Aligned Comment Corpus)

5.1. Types of Humour Support Indicators (HSIs) in the corpus

Based on the observations in study 1 and previous findings reported in the literature, our second study explores explicit humour support in the K-TACC corpus (320,118 comments, [Table 1](#)) with corpus linguistics methods. We thus turn to a purely quantitative approach for the moment. Through the use of corpus linguistics searches, we wish to

- (1) establish the variety of explicit humour support in the entire K-TACC corpus and
- (2) gain insights into the distribution of different realisations of humour support.

To operationalise humour support for a quantitative study, we start from the assumption that certain acronyms, emojis, laugh particles, etc. can be understood as indices for humour support. We call these indices humour support indicators (HSIs). As indicated in Section 3.2, we searched for lists of specific terms, which were based on findings made in empirical studies ([Hübler and Bell, 2003](#); [Farnia and Karimi, 2019](#); [König, 2019](#); [Tagliamonte and Denis, 2008](#); [Taylor, 2009](#)), our own findings in Study 1, and a number of online lists that informally collect how users in text-based online communication do humour.⁶ The complete list of search terms can be found in the [Appendix \(Table A\)](#). [Table 5](#) illustrates the overall distribution of HSIs in the K-TACC corpus. It shows that we found 78,432 HSIs and that emojis, acronyms and laugh particles are particularly frequent encodings of humour support in timed comments. In what follows, we will discuss each category of HSI separately.

⁶ In particular we included the lists on: <http://mentalfloss.com/article/63935/15-ways-laugh-online>; <http://digg.com/2018/how-different-countries-laugh-online>; <https://research.fb.com/the-not-so-universal-language-of-laughter/#fn2>; <https://linguisticator.com/laughing-different-languages/>; <https://unicode.org/emoji/charts/full-emoji-list.html>.

Table 5

Humour Support Indicators in K-TACC.

Humour Support Indicator	n	per million words	% of HIS (n = 78,432)
Acronyms	18,153	6238	23.1
Emoji	32,115	11,035	40.9
Emoticons	9246	3177	11.8
English humour lemmata	2867	985	3.7
Laugh particles	16,051	5515	20.5
HIS overall	78,432	26,950	100

5.1.1. Acronyms

Abbreviated language is an expected or even prototypical feature of TMC (see e.g. Bieswanger, 2013: 474–475). In terms of humour-specific abbreviations, we identified 12 acronyms (see Appendix, Table A) which we could safely link to humour support. These different acronyms are all variants of one of four types: *Lol*, *lmao*, the French acronym *mdr* (mort de rire ‘being dead from laughing’) or *rofl*. Searching our corpus for these patterns resulted in 374 different strings of text in K-TACC. For instance, we found variants such as “LMAOO”, “LMFAOOOO”, “lmfao”, “LMAOSHJDD”, “lmaolmaolmao” for the *lmao* group. As Table 6 shows, *Lol*, arguably the most well-known example of the group, accounted for 64% of all humour indicating acronyms, 31% of acronyms are variants of *lmao*, whereas 4.4% of acronyms were variants of the French *mdr*, which underlines the multilingualism of our data.

Table 6

Humour indicating acronym types in K-TACC.

Acronym type	n	% (n = 18,153)
lol	11,693	64.4
lmao	5549	30.6
mdr	790	4.4
rofl	146	0.8
acronyms overall	18,153	100

5.1.2. Emojis

All 14 humorous emoji we looked for (see Appendix, Table A) appear in the corpus. Table 7 demonstrates, however, that there is a very clear preference in the commenting community for the crying laughing emoji (27,435 instances, 85.4%). The ‘rolling on the floor laughing with tears’ emoji is used 1559 times (4.9%, n = 32,115), whereas all other humour indicating emojis are marginal in terms of their frequency.

Table 7

Humour indicating emojis in K-TACC.

Emoji	n	% (n = 32,115)
😂	27,435	85.4
🤣	1559	4.9
😃	469	1.5
😆	423	1.3
😅	367	1.1
😊	1862	5.8
Other emojis (10 types)		
Emojis overall	32,115	100

5.1.3. Emoticons

We looked for 23 typographic emoticons (e.g.:) or ;, see Appendix, Table A) and spelling variants of each of them (e.g. :))) and found 78 different types. Analogous to what was described for acronyms, we understood “:”, “:))” and “:)))” as three different types of the same emoticon lemma “:)”. Whereas there are thus diverse emoticon types, we found that in this category, as was the case for emojis (see Section 5.1.2), the commenting community has a strong preference for only few encodings of humour support. Specifically, the emoticon lemmas XD, :, and :D together account for 97% of humour indicating emoticons in the data (see Table 8, sum of first three rows). Of the six Asian-style emoticon lemmas we found, i.e. those with a horizontal rather than vertical layout, only ^_ (89 occurrences) and ^~ (41 occurrences, not in Table 8) appear in comments more than just a couple of times.

Table 8

Humour indicating emoticons in K-TACC.

Emoticon	n	% (n = 9246)
XD	6911	74.7
:)	1207	13.1
:D	810	8.8
^-^	89	1
=)	65	0.7
other emoticons (14 types)	164	1.8
emoticons overall	9246	1

5.1.4. English humour lemmata

In order to include linguistic realisations of humour support, we looked for the lemmas and bigrams listed in [Table 9](#) (derived as typical from the case study, see [Appendix, Table A](#)). It appears that commenters use *funny* and *laugh* in their comments, whereas the other lemmas only occur rarely. Apart from being the least frequent HSI category we list here, it needs to be mentioned that the listed instances were not cleaned of false positives, such as comments in which the lemmas were negated or otherwise used for functions other than humour support.

Table 9

English humour vocabularies in K-TACC.

Humour lemmas	n	% (n = 2867)
funny	1188	41.4
laugh	1158	40.4
hilarious	319	11.1
joke	153	5.3
humour	28	1
burst out	21	0.7
humour lemmas overall	2867	100

5.1.5. Laugh particles

The final category of HSI we included were laugh particles (see list of search terms in [Appendix, Table A](#)). Analogous to the other categories, we understood e.g. “kk”, “kkk” and “kkkk” as three different types of the laugh particle lemma *kk*. [Table 10](#) shows that commenters predominantly used either *haha*, *kk*, or *jaja*. Even more so than in the other categories, laugh particles are realised in many different ways, which includes capitalisation and reduplication (e.g. “AHAHAHAHAHA”, “kkkkkkkkkkkkkkkkkk”). In total, we found 2107 types. We also found that the preferred amount of reduplication varies from laugh particle to laugh particle. *Haha* is realised mostly as “haha” or “hahaha” (787 and 643 occurrences, respectively), whereas *jaja* occurs mostly as “jajaja” or “jajajaja” (683 and 449 occurrences). The Korean letter ㅋ ('k', signalling laughter in Korean online chat conventions), which we had found in Study 1, turned out to be infrequent (63 occurrences of two or more ㅋ in a row).

Table 10

Laugh particles in K-TACC.

Laugh particle	n	% (n = 16,051)
haha	5585	34.8
kk	5346	33.3
jaja	4296	26.8
hehe	296	1.8
jeje	162	1
other laugh particles	366	2.3
Laugh particles overall	16,051	100

5.2. Discussion of HSI occurrences in the K-TACC corpus

The results of our corpus searches indicate that explicit humour support in timed comments is primarily done para-linguistically, by means of emojis (40.9%, n = 78,432), laugh particles (20.5%), and emoticons (11.8%). Acronyms are used regularly as well, whereas explicit linguistic reference to something humorous, e.g. by calling it “funny”, or linguistic realisation of emotive response (e.g. with the lemma “laugh”) occurred rarely. This is so even when we take into account that we limited our searches to English lemmas and that we did not include expressions such as “I’m dying” (138 occurrences in KTACC), “I can’t even” (73 occurrences), or “my stomach hurts” (11 occurrences), which sometimes refer to humour.

When we look at the individual categories, we see that commenters do not adhere to only a few standardised forms and instead use a large number of spellings to express their response to humour. We assume that in many cases, iconicity is a factor and thus that “hahahahahaha”, “XDDDDDDDD” and “LMAOOOOOOOOO” encode a stronger response to humour through reduplication of syllables or letter than “haha”, “XD” and “LMAO”. Similarly, capitalisation likely serves as an intensifier.

Despite the resulting variety, the use of HSIs appears to be strongly conventionalised. We find that *lol* and *lmao* are the common humour support acronyms, *XD* is the conventional humour-indicating emoticon and when realised as a laugh particle, humour support occurs as *haha*, *kk*, or *jaja*. In the more standardised categories, the crying laughing emoji is the conventional humour response emoji, whereas *funny* and *laugh* are the most common lemmas employed by commenters to do humour support. Given the existence of language standards, it is not surprising that the more linguistic categories – lemmata and acronyms – would show such a high degree of conventionalisation. It may be more surprising that the same also applies to paralinguistic features including emoticons and emojis, for which the literature has in other contexts provided complex disambiguations of meaning, function and usage practices (see e.g. Danesi, 2017; Graham, 2019). However, for typographic emoticons, already Garrison et al. (2011) find that (in their case IM) users show a strong preference for only a handful of signs (220 of 301 emoticons were either :-), :-P or ;-)), whose placement was furthermore also conventionalised. Similarly, Skovholt et al. (2014) find a reliance on only a few emoticons in Norwegian, Danish, Swedish and Finnish workplace emails, and similar effects of emoticon conventionalisation are also attested by Tossell et al. (2012) and Thompson and Filik (2016). Emoji use too has been described in the literature as both creative and context-specific, but also conventional (e.g. Gawne and McCulloch, 2019; Graham, 2019).

Our analysis provides further evidence for the conventionality of emoticon and emoji use. In fact, when it comes to humour support, the reliance on only a few signs appears to be even more pronounced than in the existing literature. We still find a wide variety of different emoticon spellings and a range of different emoji that are used to respond to humour, but our analysis clearly indicates that *Viki* users have converged on 😂 and XD to express humour support through emoji and emoticons, respectively.

That HSI usage more generally follows strong conventions can be further underlined by looking at the seven most frequent HSI types, which together make up more than 86% of all HSIs we found in K-TACC (Table 11).

Table 11
Frequent HSIs in K-TACC.

HSI	n	% (n = 78,432)
1 😂	27,435	34.9
2 lol	11,693	14.9
3 XD	6911	8.8
4 haha	5585	7.1
5 lmao	5549	7.1
6 kk	5346	6.8
7 jaja	4296	5.5
Most frequent HSIs (sum of rows 1–7)	66,815	85.2
other HSIs	11,617	14.8
HSIs overall	78,432	100

This conventionalised realisation of humour support also underlines that HSIs are best interpreted akin to punctuation as indicators of a particular stance or illocutionary force (see e.g. Dresner and Herring, 2010), rather than as an iconic representation of specific paralinguistic responses to humour. Based on the data we analysed, we thus hypothesise that *Viki* commenters are less interested in accurately or creatively representing their immediate response to humour in textual form, and instead make use of conventionalised paralinguistic textual features to signal and perform their emotive stance and to support humorous communication.

6. Study 3: Clusters of HSI in two K-drama episodes

In our third study, we identified clusters of humour support indicators (HSIs) in the same two episodes from the K-TACC corpus we already used in Study 1 (Section 4), i.e. the first episodes of MH and YAS. Identifying such clusters enables us to find hotspots of humour support and thus longer segments of timed comment discourse in which users share their humorous stance with each other. Apart from this shift of focus away from the individual comment to interaction within the community, the link between HSI clusters and the videotream they accompany means that we can also identify scenes in K-drama episodes that are likely to be of interest to humour scholars – i.e. the collective comments serve as a community annotation of humorous moments in the K-drama itself.

We used the manual coding from Study 1 as a benchmark (row 2, Table 12) and compared our corpus-based findings (row 3) to them. The different foci (humour aspect in Study 1, humour support in Study 3) and methodologies lead to a difference in the number of identified comments, with the quantitative method tagging fewer comments as humour-relevant. However, our independent qualitative and quantitative attempts at identifying humour-relevant comments for the most part identified the same comments (row 4, Table 12). We take this as a validation of our corpus-assisted method of identifying humour support through HSIs.

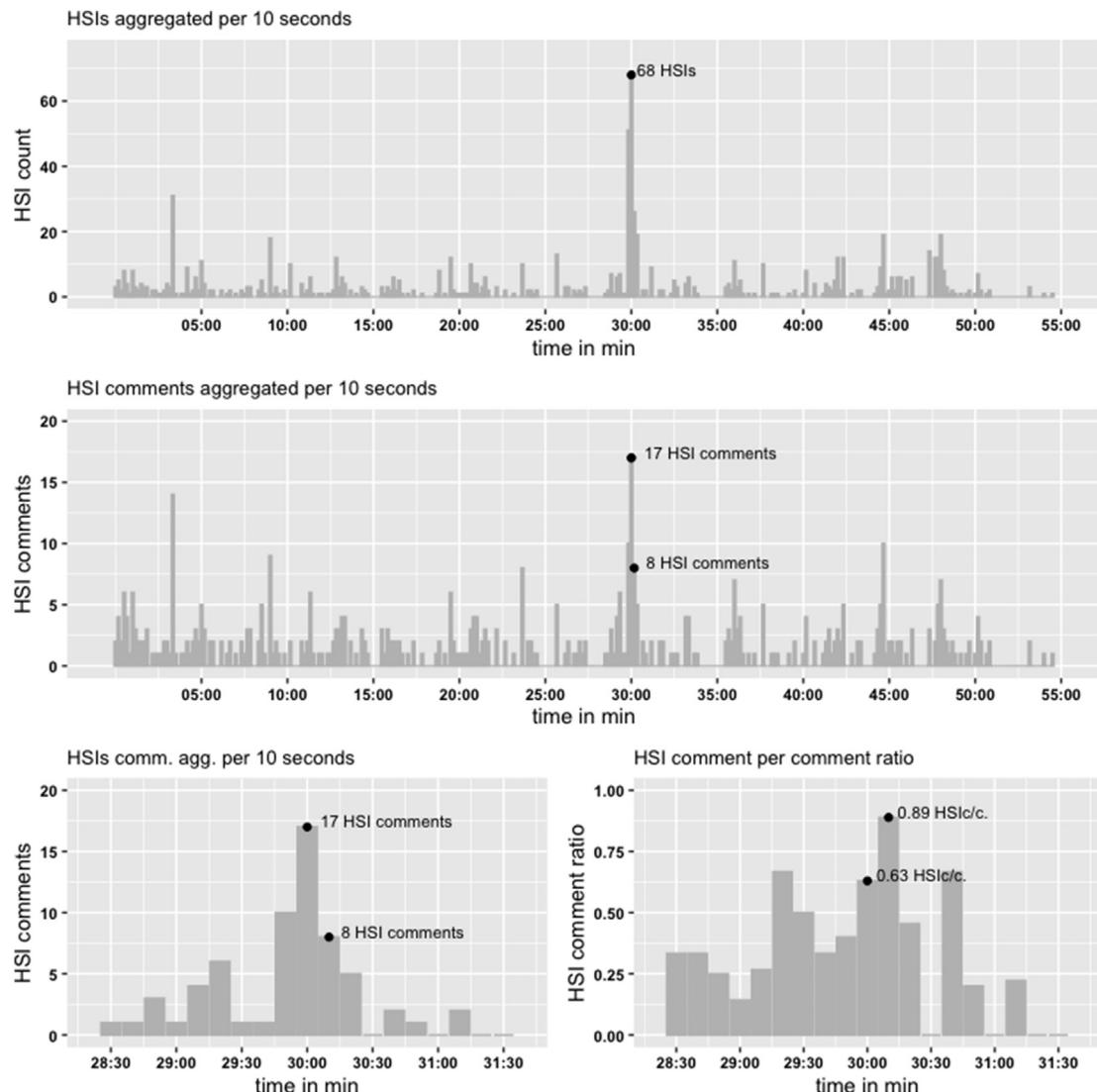
Table 12HSIs in *Meloholic*, episode 1, and *You're all surrounded*, episode 1.

	Meloholic	You're all surrounded			
		n	% of comments (N = 2586)	n	% of comments (N = 3333)
1 Comments overall	2586			3333	
2 Humorous comments identified in Study 1	587	23		746	22
3 Humour support comments identified in Study 3	479	19		656	20
4 Comments identified as humour-relevant by both methods	453	18		603	18

Our pragmatic understanding of timed comments means that we approach the communicative practice of commenting as situated language use. The context for commenting consists of the previously posted timed comments on the one hand, and of the audiovisual artefact on the other. The first, quantitative, step of mapping HSI comment frequency to the timecode of the respective episode lets us identify humour-relevant clusters of comments without previous qualitative analysis (Sections 6.1 and 6.2). The second, qualitative, step is to examine the found sequences in their multimodal context (Section 6.3).

6.1. *Meloholic*, episode 1

Our list-based quantitative approach to explicit humour support in MH identified clusters of HSIs and of comments containing HSIs in the first episode. Fig. 1 presents the distribution of HSIs (top) and comments containing HSIs (middle) in

**Fig. 1.** HSI comment clusters in Melo Holic, Ep.1.

10 s intervals. This illustrates that there are particular moments in MH, episode 1, at which commenters make abundant use of HSIs. We chose the most salient of these moments, at 30:00, for further analysis. The smaller graphs zoom in on this moment and again show the comments containing HSIs (bottom left) and the proportion of comments overall that were identified as humour-relevant (bottom right). As can be seen based on these graphs, around minute 30 in the episode, users comment at increased frequency, and – absolutely as well as per comment – employ more humour support than elsewhere in the episode.

(3) shows the timed comments that are posted in the 5 seconds before and after the peak at 30:00. It illustrates a snippet of the range of HSI types we discussed in Section 5 and shows that users do humour support contemporaneously and pseudo-synchronously. While we do not observe – in this case – any direct interaction among commenters, there is abundant evidence of alignment, i.e. of several commenters posting comments at the same timecode that are similar in their use of HSIs as well their intensity (e.g. the comments at 30:00 and 30:01). Some commenters explicate their emotive response or the aspects of the video they refer to, but most of the comments consist of paralinguistic humour support without explicit reference. Emoticons, such as those posted by Albina at 29:56, and laugh particles, e.g. Elnora's comment at 29:59, are prototypical examples of users responding to something they perceived as humorous (all names are pseudonyms).

(3) Timed Comments to MH, episode 1, 29:55–30:05

6.2. You're All Surrounded, Episode 1

The identification of HSI clusters in the first episode of YAS points to several moments at which humour support is prominent in the comments. We again selected a scene based on the absolute frequency of HSIs (Fig 2, top) and comments containing HSIs (middle), and added the ratio of humour support containing comments to comments overall as a point of reference (bottom right).

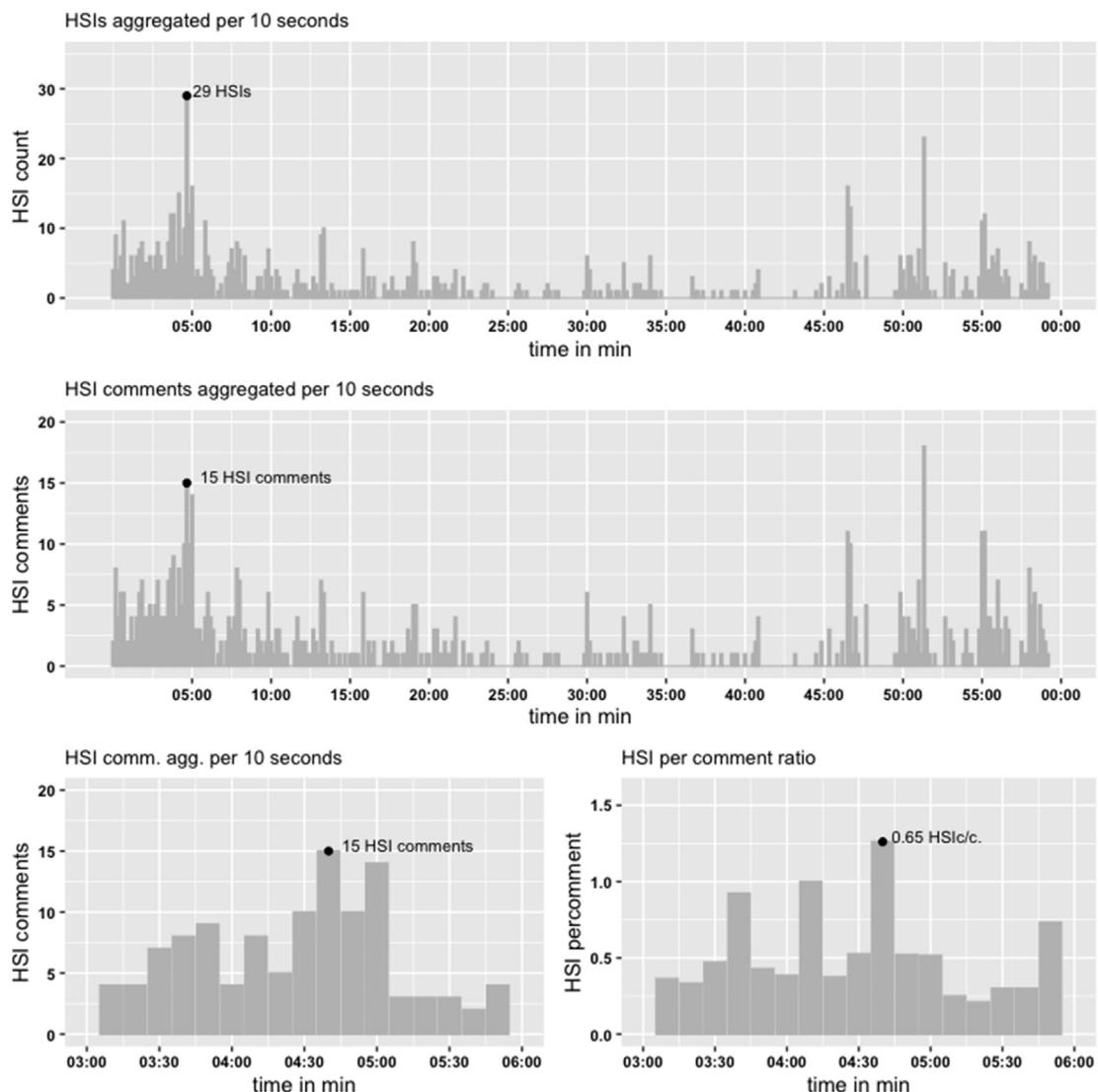


Fig. 2. HSI and comment clusters in You Are All Surrounded, Ep. 1.

Based on the peak at 4:30, we analysed again the comments posted during the 5 seconds before and after the peak (Example 4). Here, the timed comment sequence is neither as dense in terms of humour support (number of comments with HSIs that were posted in those 10 s), nor as intense in terms of its (para-)linguistic encoding (e.g. shorter laugh particle sequences and fewer comments with multiple HSIs). Furthermore, we also see a different choice of HSI types (e.g. no emojis) and less evidence of aligning one's comments with those that are already there.

(4) Timed Comments to YAS, episode 1, 04:25–04:35.

04:25	Pearle:	Lee Seung Gi !!!!!!! oppa!!!! tan lindo mi bocacha de voz hermosa!!!!!!!!!!!! muah!!! Kisssssjajajajaja
04:25	Lucretia:	OMG LOL this is killing me already
04:26	Virgil:	OMG IT'S AHN JAE HYUN KJPFIIEVJGPR
04:27	Queen:	lol, what in the world is going on?
04:28	Harriette:	Omg! It's him!
04:29	Rowena:	ahahahhahahah they are pursuing the bad guys or competing against each other xDXD
04:30	Sadye:	LA EDAD LA JUVENTUD GANA
04:30	Lovie:	LMAO
04:31	Buster:	hé oui la jeunesse xd
04:31	Virginia:	muy buena la cancion xd tan bello oppa
04:31	Dixie:	lol is he old....
04:31	Constance:	Hahhha go oppa
04:32	Elmira:	que malo lo deja botado ...

04:33	Alonzo:	Hahhahahaha
04:33	Clemmie:	Slow and steady wins the race.
04:34	Constance:	Hhhahahaha
04:34	Letitia:	Lmao
04:34	Wade:	I cant stop laughing! 4min into it and i am loving it!
04:34	Ray:	jajajajajaja aver quien gana

6.3. From comments to subtitled drama: humorous scenes in K-drama

Before offering a general discussion of the sequences of timed comments to which the quantitative analysis led us, we add here a brief comment on the usefulness of HSI-frequency to identify humorous scenes in K-drama. In the romantic fantasy comedy *Meloholic*, this measure led us to the following scene. Eun-ho, the protagonist of MH, has acquired the ability to read women's thoughts and has just told his friend, professor Kim Joo-Seung, about his new skill. When the professor does not believe him, Eun-ho decides to demonstrate his skill by reading the mind of a female colleague of Kim Joo-Seung. In her thoughts, he sees a sexual encounter between her and the professor and – around 29:40 in the video – starts re-enacting the scene by playing the female colleague's part. He wipes the books off of the professor's desk and tells him that he is still sexy, the professor is perplexed and then apologetic towards the female colleague who stands by and appears displeased at the display since she assumes that her lover told Eun-ho about the encounter. She then slaps Kim Joo-Seung and leaves the room.

As mentioned in the description in Section 6.1, most of the comments are underdetermined when it comes to referencing humorous incongruities in the scene. However, we do find explicit mention of the fact that Eun-ho acts out the scene, as well as to the way he utters the word "sexy". We can further confirm the collective sender's humorous intent in that scene not just based on our own introspection, but also based on multimodal markers, such as the light-hearted music, the expressive facial expressions by all three actors, and the inclusion of the sound of a bleating goat, which is later also taken up in the comments ("Omg the goat sound from reply 1988 xD", 30:21, Zona, not part of Example 4).

In the first episode of the crime and action drama YAS, the same approach pointed to the end of a humorous chase scene, which is again marked as light-hearted by means of the music as well as a mixture of stereotypical and parodic plot and style elements, such as the use of slow motion, jumping over objects, mass collisions and the interruption of the chase in order for one of the male pursuers to offer his jacket to a female passer-by. Based on the timed comments alone, we again only receive few clues as to what exactly commenters identify as humorous. However, a few descriptive comments make reference to facial expressions and "wiggling" cheeks, which we can interpret as a reaction to the slapstick-aspects of the scene.

In order to arrive at a fuller picture of how these comments do humour support, we can return to Study 1's coding of the same examples. Our qualitative coding indicates that most comments in Example 3 from MH are dedicated exclusively to humour support, while only a few also make reference to the plot. In Example 4 from YAS, on the other hand, most comments are multifunctional. In addition to responding to humour, commenters comment on the plot ("lol, what in the world is going on?"), display knowledge of actors ("Omg! It's him!") and dialogically engage with the fictional characters ("Hahhha go oppa⁷"). This multifunctionality notwithstanding, our method of using clusters of HSIs to identify humour-relevant scenes turned out to be effective in both episodes. In other words, our list of HSIs accurately indicate humour support, and accumulations of humour support point to humour-relevant scenes.

7. Humour in *Viki* timed comments: General discussion and conclusion

The results of our three studies have indicated that viewers of the K-drama episodes in our corpus often use timed comments to express their emotive stance and in particular to typographically encode their reaction to what they perceive to be humorous. When we looked more broadly at how commenters encode humour support, we found that there are only few, conventionalised patterns that indicate a humorous response, and that there seems to be a preference for paralinguistic humour support. Plausible reasons for these findings are the brevity and playfulness of these patterns, their visibility, and perhaps also the multilingual context in which they occur. Finally, when we mapped humour support against time in two K-drama episodes, we were led to clusters of humour support, which in turn also pointed to humour-relevant scenes in the television series. The less frequent descriptive comments allowed us to more plausibly connect the more frequent expressive comments without a clear reference to events in the scene. It appears, however, that commenters are often content with sharing their immediate humorous response, rather than making sure that their readers understand what exactly they find funny. Faced with the same question of attributing humour support to laughables, König (2019) finds in the context of her study of German whatsapp interaction that typically reference is established by means of sequentiality, i.e. that laugh particles at the beginning of messages refer back to the message immediately preceding them. As we have argued here, it seems more plausible in the case of *Viki*'s timed comments that comments primarily orient toward the artefact and that in the absence of any unambiguous deixis pointing towards another user or comment, commenters respond to what is happening in the video immediately before their post. This finding is also supported by the other codes we identified in Study 1 and by

⁷ *Oppa* is the Korean word for 'older brother' uttered by a younger sister. However, the term can also be used to indicate 'boyfriend' in case the female partner is younger than her boyfriend or refer to a close friend who is older.

those few comments that do contain identifiable referents. On this basis we are thus confident that it is legitimate to use HSIs to identify humorous scenes in K-drama.

It is furthermore striking that in the short excerpts we presented interaction among commenters is for the most part limited to aligning one's position and stance with those of the previous commenters. This is to say that viewers respond to humour collectively only insofar as they show similar responses at similar moments and thus that some of the timed comments may not only be pseudo-synchronous, but also pseudo-communal. On the one hand, our analysis points to an evident desire by viewers to share their (humorous) response to the drama they are watching. By sharing their stance towards the same moment in time in the artefact in great numbers, they reinforce a community interpretation of a particular moment in the artefact and thus can create in-group bonding even without direct interactivity. On the other hand, viewers are either aware that despite the synchronised flow of comments, they are in fact not communicating with other viewers in real-time, or they are at least more interested in giving voice to their immediate response rather than to interact with others and converse about the humorous aspects of the videotream. Given that in our qualitative coding for Study 1 we found substantial interactivity, we have to assume that this pseudo-commonality is connected to humour support specifically, perhaps because commenters when responding to humour favour immediacy and expressivity over cohesive interactive engagement with other commenters.

Our analyses of timed comments on *Viki* further show the importance users give to the expression of their emotive stance. In the qualitative first study we found emotive stance to be the most important function, and that humour was the third-most frequent code. Zooming in on humour support in particular, our quantitative approach in Study 2 showed the gamut of typographic humour responses in these comments, but also the conventional expression of humour support among the viewers by means of only a few frequent signs. We found some patterns that appear to be specific to the K-drama or at least an Asian viewing context, e.g. kkk or ^_. However, the most frequent signs overall were of a more generic nature, e.g. 😂 lol, XD or haha. By bringing both methods together in Study 3, we were able to validate the accuracy of the quantitative corpus-approach to finding humour support in the corpus and to identify clusters of comments that illustrate the way the viewers do humour support collectively and how they engage with those parts of the artefact they find humorous.

Apart from our exploratory and descriptive findings about timed comments, we thus also found that a quantitative, list-based approach to humour support presents an interesting new method to identify humour in videotstreams that are accompanied by timed comments. While we will only be able to offer observations on humour in K-drama and its rendering in interlingual subtitles in a future study, we have outlined here that emojis, laugh particles, and other forms of humour support can serve as a community-annotation of relevant humorous scenes.

These steps – from the qualitative coding of comment functions to the identification of HSIs and humour support clusters back to the qualitative analysis of comment sequences in context – allow us to better understand the construction of humour support as part of communal viewing within this context of participatory TV consumption.

Conflict of Interest

The authors have no affiliation with any organization with a direct or indirect financial interest in the subject matter discussed in the manuscript.

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Appendix

Table A

Search terms to find humour support in the K-TACC corpus.

Acronyms	Emojis	Emoticons	English humour lemmata	Laugh particles
\basg	😊	XD+	funny	hah?ha[A-Za-z0-9_]*
\blel	😄	:\\)+	humor	hehe[A-Za-z0-9_]*
lawl[A-Za-z0-9_]*	😅	:D+	humour	heehee[A-Za-z0-9_]*
lmao[A-Za-z0-9_]*	😂	\\)\\)+	joke	hihi[A-Za-z0-9_]*
lmfao[A-Za-z0-9_]*	😆	=\\)+	laugh	huehue[A-Za-z0-9_]*
lol[A-Za-z0-9_]*	🤣	\\(:	hilarious	jaja[A-Za-z0-9_]*

(continued on next page)

Table A (*continued*)

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