

Grounding in Online Communication: Using Emojis to Support Electronic Discourse in the Chatroom

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ABSTRACT

A growing body of research has documented how people manage common ground in basic conversational settings. However, research is scarce when it comes to negotiating common ground in online interactions. This study was carried out to fill this gap. The purpose was to examine how people used emojis to support electronic discourse in the chatroom. To this end, captured private and group WhatsApp exchanges in which participants used emojis were analysed. The results show emojis served three main functions including non-verbal cues, paralinguistic cues, and echoes of the verbal message.

Keywords: Chatroom, common ground, electronic discourse, emojis, non-verbal cues

1. INTRODUCTION

Common ground is an essential part of language use. It is a basis agreed to by all participants in any social interactions for reaching a mutual understanding (Clark, 1996). Such mutual understanding could be facilitated by using gestures, making facial expressions, and gazing eyes. In fact, such non-verbal cues are often as much important as the utterance the speaker says to the addressees (Archer & Akert, 1977). Facial expressions are universal language (Hwang & Matsumoto, 2016), telling if someone is happy, angry, or sad, and hence contribute to the establishment of common ground. Studies have shown that gestures are likely to be produced when common ground between participants in social interaction is limited (Galati & Brennan, 2014; Gerwing & Bavelas, 2004; Hilliard & Cook, 2016; Hoetjes, Koolen, Goudbeek, Kraemer, & Swerts, 2015; Holler & Stevens, 2007).

The above-mentioned studies deal with managing common ground in basic conversational settings. However, social interactions are also carried out online in which non-verbal cues like gestures, facial expressions, and eye behaviors are restricted or even entirely absent. Therefore, negotiating common ground in online communication is more challenging. The lack of non-verbal cues also makes online communication prone to misinterpretation (Paulus, 2009; Riordan & Trichtinger, 2016; Kruger, Epley, Parker, & Ng, 2005). In fact, non-verbal cues are not entirely absent in online

communications. For example, the like button on Facebook and the love button on Instagram are there to express liking through non-verbal methods. A retweet on Twitter may be construed as an expression of agreement. Research has also documented other ways to provide non-verbal cues in virtual social interactions. People may capitalize all letters as a substitute for shouting and use emoticons for facial expressions (Harris & Paradice, 2007; Riordan & Kreuz, 2010).

How people manage common ground when communicating online is an under-researched area. This study was carried out to contribute to this research niche by examining the use of emojis as non-verbal cues in the chatroom. Intriguingly, the purpose of this study is to answer the following research question: how can the use of emojis support electronic discourse in the chatroom?

2. LITERATURE REVIEW

2.1. Common ground

Common ground is generally defined as knowledge, beliefs, and assumptions that participants in an interaction know, or at least assume, they mutually share (Clark, 1996; Isaacs & Clark, 1987). Common ground could be construed as a basis agreed to by all parties for reaching a mutual understanding, and the source could be anything: gestures, facial expressions, nearby happenings, and everything Jack and Rose experienced together. Even the language they used was part of their

common ground because Jack and Rose were both members of the same community of English speakers (Clark, 1996). The common ground between Jack and Rose from the Titanic movie in 1997, as we can see in Figure 1; for example, is the aggregate of knowledge, beliefs, and assumptions they mutually share (Clark, 1992).



Figure 1 A Scene from Titanic (Cameron, 1997).

“Rose : I love you, Jack.
Jack : Don't you do that. Don't you say your goodbyes, not yet. Do you understand me?”

Those who have not watched the movie would likely be perplexed reading the excerpt as to why Jack responds to Rose saying “I love you, Jack” by saying “Don't you do that. Don't you say your goodbyes, not yet” instead of something like “I love you too.” Such confusion could happen because they do not have any knowledge that Jack and Rose shared. However, it will all make sense to those who have watched the movie. It was narrated in the movie that Rose was freezing to death, that Rose meant a farewell when she said, “I love you, Jack,” and that Jack’s response to Rose was a signal that he did not want her to give up and wanted her to survive.” Knowledge Jack and Rose shared when they held that conversation is what-so-called common ground.

The common ground between participants in a conversation can be established by means of several sources of information including what they jointly have experienced or are experiencing, both physically and culturally, and what they have jointly heard said or are jointly hearing at the moment as participants in the conversation (Brown-Schmidt & Duff, 2016; Clark, Schreuder, & Buttrick, 1983; Hanna, Tanenhaus, & Trueswell, 2003). As the conversation between participants proceeds, their common ground accumulates (Clark & Schaefer, 1989) and eventually leads to elliptical speech (Holler & Stevens, 2007). According to Stalnaker (2002), the term common ground has its origin in Paul Grice’s William James Lectures. In fact, when participants of a conversation rely on common ground, they are being cooperative (Horton & Keysar, 1996).

2.2. Emoji

Emojis, which are pictographs that represent facial expressions, people, places, or things (e.g., 😊), are becoming a mainstream form of communication for example, emojis have been increasingly so popular among smartphone users that researchers call them ubiquitous language (Lu, et al., 2016). Emojis were created by Shigetaka Kurita in 1999 (Nakano, 2016) and is believed to be extending what were previously emoticons (Al Rashdi, 2018). However, unlike emoticons, which are essentially typographs, emojis are pictographs. As the creator’s name may suggest, the term emoji comes from Japanese, which literally means “picture character,” i.e., e (picture) and moji (character) and also the emojis have been found to have the potential to reduce misinterpretations, convey emotion, clarify intention and, messages with emoji can be perceived as less credible and elicit lower levels of elaboration than those without emoji. (Evans, 2017a, 2017b; Abel, 2019).

To make emojis more popular, the “Face with Tears of Joy” emoji (😄) was crowned the Oxford Dictionaries’ Word of the Year 2015 (Sherwin, 2015). It was a somewhat bizarre decision by Oxford Dictionaries. Since the tradition began in 2004, it had been the first time that the word of the year was not actually a word and unpronounceable.

The popularity of emojis has started to attract attention from academics. For example, Riordan (2017) examined the use of emojis from the perspective of sociological theory. She concluded that emojis could help maintain and enhance social relationships. Another study examined the competition between emojis and emoticons, in which emojis were reported to cause a decline in the use of emoticons (Pavalanathan & Eisenstein, 2015). Another study reported that there was a cultural gap between user perceptions and emoji standards and suggested that new emojis from cultures other than Japan be introduced (Kimura-Thollander & Kumar, 2019). Al Rashdi’s (2018) work found that as an important visual symbol in computer-mediated-communication, emoji can express various content, including people, animals, food, activities. Emoji can be used both as an independent language and a non-verbal cue to convey meanings, which is the semantic function of emoji. In addition, emoji also have emotional functions for example he found that WhatsApp users used emojis for a wide variety of purposes including showing emotions, providing contextualization cues, showing excitement, showing agreement, responding to thanking and compliment, opening and closing conversations, linking discourse, and marking finished tasks. This shows that using emojis may facilitate the establishment of common ground during online interactions.

Table 1. Properties of language use setting.

Properties		In-Person Conversation	Telephone Conversation	Video Call Conversation	WhatsApp Chat	Press Conference
Immediacy	Copresence	✓	✗	✗	✗	✓
	Visibility	✓	✗	✓	✗	✓
	Audibility	✓	✓	✓	✗	✓
	Instantaneity	✓	✓	✓	✗	✓
Medium	Evanescence	✓	✓	✓	✗	✓
	Recordlessness	✓	✗	✗	✗	✓
	Simultaneity	✓	✓	✓	✓	✗
	Extemporaneity	✓	✓	✓	✓	✗
Control	Self-determination	✓	✓	✓	✓	✗
	Self-expression	✓	✓	✓	✓	✗

Semantically, emojis may stand independently for particular meanings. For example, the “Smile and Half-Lunar Eyes” (😊) expresses happiness. In addition, when in use, emojis also have pragmatic functions such as providing emotive tones. The latter is the focal point of this study. This study sees fit to bring emojis to the area of pragmatics since, echoing Danesi (2017), knowing how to use emojis is part of pragmatic competence, demonstrating the ability to switch codes flexibly between alphabetic and emoji writing, and also the pragmatic functions of Emoji and interactional skills that people mobilize to communicate within an online community. Emoji functions as a window on how online social life participants display expertise in the management of internet-based conversations, and thus deserves further investigation.

2.3. Electronic discourse

Language use on the Internet has come with a variety of terms including Netspeak (Crystal, 2006), E-Speak (Börjars & Burrige, 2010), and computer-mediated communication (Thurlow, Lengel, & Tomic, 2004). In this paper, it is probably best referred to as electronic discourse since this study emphasizes the interactive elements of dialogue in the chatroom, not a language variety on the Internet like Netlish or Weblish, nor does it focus on the Internet as the medium of communication.

The use of language in the chatroom is characterized by having elements of both speech and writing. On the one hand, it is written. On the other hand, people exchange messages in the chatroom pretty much the same way as they speak in-person (Börjars & Burrige, 2010). Elliptical expressions are there; Grice’s maxims are frequently flouted, but still, participants always find ways to make sense of the conversation.

The components of language use have traditionally been divided into three components: speakers, hearers, and what is spoken about. However, scholars from various disciplines have extended these three into more components, two of which are where or when we use language and how language is used (spoken, written, signalled, or mixed). The first is referred to as a scene, and the latter a medium (Hymes, 1974). Borrowing Clark’s (1996) term, this paper will use setting for the scene and medium combined.

In terms of language use settings, as illustrated in Table 1, WhatsApp chats share some properties of the following in-person conversational language (Clark, 1996; Clark & Brennan, 1991) there are some properties of language use settings. There are Copresence, it is when the participants are located in the same physical environment; Visibility, when the participants can see each other; Audibility, when the participants can hear each other; Instantaneity, when the participants perceive each other’s utterances without any perceptible delay; Evanescence, when the medium is temporary and it fades quickly; Record lessness when the participants’ utterances leave no record or artifact; Simultaneity when the participants can produce and receive utterances at once and simultaneously; Extemporaneity when the participants say what they say extemporaneously or impromptu; Self-determination when the participants determine for themselves what to say and when and the last Self-expression, it is when the participants speak as themselves.

3. METHOD

The study was carried out by analyzing captured WhatsApp exchanges in which participants used emojis. Seventeen participants voluntarily consented to make their WhatsApp conversations available for analysis after being informed about the nature of the study. Names are pseudonymized in this paper for ethical reasons. All participants were Sundanese, aged between 18 and 60.

They used the Indonesian language and Sundanese in their WhatsApp interactions. Some excerpts of their WhatsApp interactions were carefully chosen for analysis by their capacity to provide information relevant to the purpose of the study.

The analysis began with identifying the patterns of how different emojis were used by participants. Once the patterns were identified, data were group into different themes. Due to time constraints and the Covid-19 outbreak, participants were not interviewed, and data analysis was performed solely based on the subjective interpretation of the researcher.

4. FINDING AND DISCUSSION

Below are some excerpts considered relevant to the purpose of this study. English translation is intentionally made faithful to the source languages, Indonesian and Sundanese. How emojis were used in the context of this study might be different and mean differently from their use in other cultures as gestures in the face-to-face conversation would mean differently across cultures.

Broadly, this study has found that the use of emojis by participants facilitated the grounding process in three ways: by providing nonverbal cues, by echoing the verbal message, and by providing paralinguistic cues.

4.1. Emojis provide nonverbal cues

This research shows emoji messages as a replacement for nonverbal Face-to-Face (FtF) communication that extends the validity of emoji used, its significance in text messages, and the deliverance of intended meanings. As shown in this study, most of the time participants used emojis to signal emotive referents in the chatroom as they would provide non-verbal cues like gestures, facial expressions, and gestures in the face-to-face conversations.

4.1.1. Excerpt 1

1	22/12,13:07PM	Reni:	[captions a mother's picture] happy Mother's Day may you always be blessed and healthy 👉👉
2	22/12,13:08PM	Elsa:	Amen 🙏🙏
3	22/12,13:08PM	Nuni:	Aameen 🙏
4	22/12,13:11PM	Andi:	Aameen, but don't forget wire transfer your mothers so that they can go shopping 🙏
5	22/12,13:11PM	Tati:	[replies to Reni] Aamen 🙏🙏🙏
6	22/12,13:14PM	Nuni:	[replies to Andi] Agreed... 👍👍👍 👍

Figure 2 Excerpt 1.

Excerpt 1 in the Figure 2 shows that participants used the “Face Blowing a Kiss” emoji frequently (👉). Very nearly, the three participants, Reni, Elsa, and Tati, used this emoji to convey love or affection towards their mother or mother-in-law; kisses have always been the sign of affection among human beings. As the function of the yellow round face winks with wrinkled lips blowing kisses, depicted as a little red heart. It can represent a goodbye or goodnight kiss and convey feelings of love and affection more generally. The double use in every occurrence seems to serve the same function, amplifying the magnitude of the emotive referent. In the case of Tati (Excerpt 1, Line 5), it is even more amplified by the addition of the “Hugging Face” emoji (🙏). This finding is consistent with some previous literature that emojis (Al Rashdi, 2018; Gülşen, 2016) are frequently used to represent emotions. Conveying emotive referents has in fact been claimed to be the primary function of most emojis (Danesi, 2017). Bai, Dan, Mu, and Yang (2019) even refer to emojis as emotional lexicons. And also, I can conclude that from the chat above, the percentage of emoji as reflections of feeling/ emotion. Thus, functioned as emotion expressions. In addition, emoji enabled virtual interactions serving as situated interacting environment at which users were able to understand their facial expression and mood through various emoji offered.

4.1.2. Excerpt 2

In this excerpt, Budi was trying to persuade his friend pseudonymized as April to click a referral link from an online marketplace so that he could get a shopping voucher. An interesting finding is that people may also use emojis to fake emotions in the chatroom. For example, Budi used the “Face Blowing a Kiss” emoji frequently (👉) by (figure 3, Excerpt 2, Line 3) not to signal emotive referent, but to flatter April to click the referral link. Such things also happen in face-to-face conversations. People sometimes try to look nice insincerely to win the favors of others. In this respect, Dresner and Herring (2010) argue that such function is iconic, rather than pragmatic.

1	06/09,16:21PM	Budi:	Click this [referral link to get a shopping voucher], please
2	06/09,16:21PM	Budi:	you're beautiful
3	06/09,16:21PM	Budi:	👉
4	06/09,16:22PM	April:	Done
5	06/09,16:22PM	Budi:	Thank you, my April 🙏

Figure 3 Excerpt 2.

However, as Al Rashdi (2018) put it, the use of emojis are in nature voluntarily. That could be considered intentional communicative signals, not necessarily representing real emotions.

4.2. Emojis echo verbal message

Some emojis were found to be used to repeat and emphasize the verbal message. For instance, unlike the use of face emojis, which were adjunctively used to signal emotive tones, hand gesture emojis in Excerpt were used only to echo the verbal message. The verbal act of responding to a prayer (Excerpt 1, Line 3) would be successfully executed by the word “aameen.” However, the addition of the “Palms Up Together” emoji (🙌) strengthens the message. Likewise, tripling the letter “e” in the word “agreed” (Excerpt 1, Line 6) is to strengthen the verbal act of agreeing, and the use of the four “Thumb-Up” emojis (👍) makes it even stronger.

4.3. Emojis provide paralinguistic cues

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The finding also shows that participants used emojis to provide paralinguistic cues. “Paralinguistic” role in communication operates in tandem with words, phrases and sentences to convey important emotional and social aspects of a conversation. Such information can be analyzed in an almost instantaneous fashion by the individuals taking part in the conversation and significantly enriches the information that is exchanged. Paralanguage maybe belongs to non-verbal communication; however, this study defines paralanguage as speech elements such as prosody, pitch, and intonation as opposed to other non-verbal cues like hand gestures, facial expressions, and body movements.

4.1.3. Excerpt 3

In this excerpt, two friends were gossiping about someone, pseudonymized as Mr. Suyanto, who was getting married for the third time. It is part of Indonesian culture that people will usually gossip about someone who is married more than once.

Excerpt 3 in Figure 4 shows that Adis was trying to tell a “big news.” She did it as if it was a secret by signaling with the “Shushing Face” emoji (🤫) (Excerpt 3, Line 1). Dea replied (Excerpt 3, Line 2) with the “Thinking Face” emoji, indicating that she was anticipating what Adis was going to say. Once she heard the news, she reacted with the combination of the word “what” and three “Screaming Face” emojis (😱). This emoji may be inferred that Dea was feeling shocked and that she raised the intonation when she said the “what.” This instance exemplifies the use of emojis as paralinguistic cues.

4.4. On the universality of emojis

Some literature (Danesi, 2017) regarded emojis as a universal language. This study, like other previous literature (Abel, 2019; Al Rashdi, 2018; Siever, 2020), rejects this notion. The reason why emojis cannot be used independently. Even if someone does use them without text surrounding them as Sela, Ira, and Arif did (Figure 5, Excerpt 4, Lines 2, 3, 4), their meanings cannot be fully understood without the proceeding text written by Cecep. The “Sleeping Face” emoji (😴) would be likely construed as someone is asleep. However, this not the case in Excerpt 4. Sela seems to indicate that she was extremely tired of assignments. Ira and Arip echoed Sela by repeating the same emojis. In Indonesian pop culture, that is to signal agreement. Sometimes, some WhatsApp users would go like “😴😴😴😴 (2),” “😴😴😴😴 (3),” and so on, to signal agreement with the previous message.

- 1 11/10,20:11PM **Adis:** You know what? 🤫
- 2 11/10,20:29PM **Dea:** What? 🤔
- 3 11/10,20:29PM **Adis:** Mr. Suyanto is getting married 😱😱😱
- 4 11/10,20:30PM **Dea:** What 🙌🙌🙌 for the third time?
- 5 11/10,20:30PM **Dea:** You're not joking, are you?
- 6 11/10,20:31PM **Adis:** Mom's invited. Saw the card on the table.

Figure 4 Excerpt 3.

- 1 15/11,08:13AM **Cecep:** Guys, here's another [course's name] assignment 😴😴😴
- 2 15/11,08:14AM **Sela:** 😴😴😴😴
- 3 15/11,08:14AM **Ira:** 😴😴😴😴
- 4 15/11,08:16AM **Arip:** 😴😴😴😴
- 5 15/11,09:02AM **Adit:** Seriously? Another one? Come on, it's Sunday!

Figure 5 Excerpt 4.

In this excerpt, a class captain pseudonymized as Cecep announced on WhatsApp that they had just got

another assignment from one of their teachers infamous for always piling work on students. Another reason not to call emojis universal language is that people from different cultures have not reached a consensus on how they understand and use emojis. Culture-specific aspects would play a major role in determining the meaning of emojis.

4. CONCLUSION

In face-to-face communication, a wide variety of functional verbal (e.g., stress, intonation, tone, etc.) and nonverbal (e.g., body language, dress, facial expression, etc.) tools can facilitate the achievement of the communicative goal for both parties. However, such virtual communication circumstances like instant messaging, which are mainly based on written texts, make verbal communication incomplete due to absence of suprasegmental features, and make it even impossible for the participants to use conventional nonverbal tools for smooth and successful communication. Like communicative cues in face-to-face conversations, emojis in the chatroom can be used and understood differently across different cultures. In the specific context of this study, emojis were used by participants mainly to provide non-verbal cues, to emphasize the verbal message, and to provide paralinguistic cues. The information presented in this paper is largely based on the subjective interpretation of the researcher. Because of time constraints and the Covid-19 outbreak, interviews with the participants could not be carried out. Further studies should interview the participants so as to figure out the real intention of the inclusion of certain emojis in their WhatsApp exchanges.

REFERENCES

- Abel, J. E. (2019). Not everyone 🗨️s: Or, the question of emoji as 'universal' expression. In E. Giannoulis, & L. R. A. Wilde (Eds.), *Emoticons, kaomoji, and emoji: The transformation of communication in the digital age* (pp. 25-43). New York: Routledge.
- Al Rashdi, F. (2018). Functions of emojis in WhatsApp interaction among Omanis. *Discourse, Context, and Media*, 26, 117-126. doi:10.1016/j.dcm.2018.07.001
- Archer, D., & Akert, R. M. (1977). Words and everything else: Verbal and nonverbal cues in social interpretation. *Journal of Personality and Social Psychology*, 35(6), 443-449. doi:10.1037/0022-3514.35.6.443
- Bai, Q., Dan, Q., Mu, Z., & Yang, M. (2019). A systematic review of emoji: Current research and future perspective. *Frontiers in Psychology*, 10, 2221. doi:10.3389/fpsyg.2019.02221
- Börjars, K., & Burridge, K. (2010). *Introducing English grammar* (2nd ed.). London: Hodder Education.
- Brown-Schmidt, S., & Duff, M. C. (2016). Memory and common ground processes in language use. *Topics in Cognitive Science*, 8(4), 722-736. doi:10.1111/tops.12224
- Cameron, J. (Director). (1997). *Titanic* [DVD]. Motion Picture.
- Clark, H. H. (1992). *Arenas of language use*. Chicago: University of Chicago Press.
- Clark, H. H. (1996). *Using language*. Cambridge: Cambridge University Press.
- Clark, H. H., & Brennan, S. E. (1991). Grounding in communication. In L. B. Resnick, J. M. Levine, & S. D. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 127-149). Washington, DC: APA Books.
- Clark, H. H., & Schaefer, E. F. (1989). Contributing to discourse. *Cognitive Science*, 13(2), 259-294. doi:10.1016/0364-0213(89)90008-6
- Clark, H. H., Schreuder, R., & Buttrick, S. (1983). Common ground and the understanding of demonstrative reference. *Journal of Verbal Learning and Verbal Behavior*, 22(2), 245-258. doi:10.1016/S0022-5371(83)90189-5
- Crystal, D. (2006). *Language and the internet* (2nd ed.). Cambridge: Cambridge University Press.
- Danesi, M. (2017). *The semiotics of emoji: The rise of visual language in the age of the internet*. London & New York: Bloomsbury Academic.
- Dresner, E., & Herring, S. C. (2010). Functions of the nonverbal in CMC: Emoticons and Illocutionary force. *Communication Theory*, 20(3), 249-268. doi:10.1111/j.1468-2885.2010.01362.x
- Evans, V. (2017a). *The emoji code: How smiley faces, love hearts, and thumbs up are changing the way we communicate*. London: Michael O'Mara Books.
- Evans, V. (2017b). *The emoji code: The linguistics behind smiley faces and scaredy cats*. New York: Picador.
- Galati, A., & Brennan, S. E. (2014). Speakers adapt gestures to addressees' knowledge: Implications for models of co-speech gesture. *Language, Cognition and Neuroscience*, 29(4), 435-451. doi:10.1080/01690965.2013.796397
- Gerwing, J., & Bavelas, J. (2004). Linguistic influences on gesture's form. *Gesture*, 4(2), 157-195. doi:10.1075/gest.4.2.04ger

- Gülşen, T. T. (2016). You tell me in emojis. In T. Ogata, & T. Akimoto (Eds.), *Computational and cognitive approaches to narratology* (pp. 354-375). Hershey: IGI Global.
- Hanna, J. E., Tanenhaus, M. K., & Trueswell, J. C. (2003). The effects of common ground and perspective on domains of referential interpretation. *Journal of Memory and Language, 49*(1), 43-61. doi:10.1016/S0749-596X(03)00022-6
- Harris, R. B., & Paradice, D. (2007). An investigation of the computer-mediated communication of emotion. *Journal of Applied Sciences Research, 3*(12), 2081-2090.
- Hilliard, C., & Cook, S. W. (2016). Bridging gaps in common ground: Speakers design their gestures for their listeners. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 42*(1), 91-103. doi:10.1037/xlm0000154
- Hoetjes, M., Koolen, R., Goudbeek, M., Krahmer, E., & Swerts, M. (2015). Reduction in gesture during the production of repeated references. *Journal of Memory and Language, 79*, 1-17. doi:10.1016/j.jml.2014.10.004
- Holler, J., & Stevens, R. (2007). The Effect of common ground on how speakers use gesture and speech to represent size information. *Journal of Language and Social Psychology, 26*(1), 4-27. doi:10.1177/0261927X06296428
- Horton, W. S., & Keysar, B. (1996). When do speakers take into account common ground?. *Cognition, 59*(1), 91-117. doi:10.1016/0010-0277(96)81418-1
- Hwang, H. C., & Matsumoto, D. (2016). Facial expressions. In D. Matsumoto, H. C. Hwang, & M. G. Frank (Eds.), *APA handbook of nonverbal communication* (pp. 257-288). Washington, DC: American Psychological Association.
- Hymes, D. (1974). *Foundations in sociolinguistics: An ethnographic approach*. Oxon: Tavistock Press.
- Isaacs, E. A., & Clark, H. H. (1987). References in conversation between experts and novices. *Journal of Experimental Psychology: General, 116*(1), 26-37. doi:10.1037/0096-3445.116.1.26
- Kimura-Thollander, P., & Kumar, N. (2019). Examining the "global" language of emojis: Designing for cultural representation. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (pp. 1-14). New York: Association for Computing Machinery. doi:10.1145/3290605.3300725
- Kruger, J., Epley, N., Parker, J., & Ng, Z. W. (2005). Egocentrism over e-mail: Can we communicate as well as we think?. *Journal of Personality and Social Psychology, 89*(6), 925-936. doi:10.1037/0022-3514.89.6.925
- Lu, X., Ai, W., Liu, X., Li, Q., Wang, N., Huang, G., & Mei, Q. (2016). Learning from the ubiquitous language: an empirical analysis of emoji usage of smartphone users. In *UbiComp '16: Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (pp. 770-780). New York: Association for Computing Machinery. doi:10.1145/2971648.2971724
- Nakano, M. (2016). Why and how I created emoji: Interview with Shigetaka Kurita. Retrieved January 3, 2021, from Wayback Machine: <https://web.archive.org/web/20160610220635/http://ignition.co/105>
- Paulus, T. M. (2009). Online but off-topic: Negotiating common ground in small learning groups. *Instructional Science, 37*(3), 227-245. doi:10.1007/s11251-007-9042-5
- Pavalanathan, U., & Eisenstein, J. (2015). Emoticons vs. emojis on Twitter: A causal inference approach. Association for the Advancement of Artificial. Retrieved from <https://arxiv.org/abs/1510.08480>
- Riordan, M. A. (2017). Emojis as tools for emotion work: Communicating affect in text messages. *Journal of Language and Social Psychology, 36*(5), 549-567. doi:10.1177/0261927X17704238
- Riordan, M. A., & Kreuz, R. J. (2010). Cues in computer-mediated communication: A corpus analysis. *Computers in Human Behavior, 26*(6), 1806-1817. doi:10.1016/j.chb.2010.07.008
- Riordan, M. A., & Trichtinger, L. A. (2016). Overconfidence at the keyboard: Confidence and accuracy in interpreting affect in e-mail exchanges. *Human Communication Research, 43*(1), 1-14. doi:10.1111/hcre.12093
- Sherwin, A. (2015, November 17). 'Face with tears of joy' emoji named Word of the Year by Oxford Dictionaries. Electronic Newspaper Article. Retrieved from <https://www.independent.co.uk/arts-entertainment/books/news/emoji-named-word-year-oxford-dictionaries-a6737146.html>
- Siever, C. M. (2020). 'Iconographic communication' in digital media: Emoji in WhatsApp, Twitter, Instagram, Facebook—From a linguistic perspective. In E. Giannoulis, & L. R. Wilde (Eds.), *Emoticons, kaomiji, and emoji: The transformation*

of communication in the digital age (pp. 127-147).
New York: Routledge.

Stalnaker, R. (2002). Common ground. *Linguistics and philosophy*, 25(5/6), 701-721.
doi:10.1023/A:1020867916902

Thurlow, C., Lengel, L., & Tomic, A. (2004). *Computer mediated communication: Social interaction and the Internet*. London, Thousand Oaks, New Delhi: Sage.