Print ISSN: 1738-3110 / Online ISSN 2093-7717
JDS website: http://kodisa.jams.or.kr/
http://dx.doi.org/10.15722/jds.18.8.202008.23

Consumption of Visual Cues in Computer-Mediated Environments

Hwanho CHOI

Received: July 09, 2020. Revised: July 17, 2020. Accepted: August 05, 2020

Abstract

Purpose: In the digital age, visual cues in computer-mediated environments are becoming a very popular means of communication. Therefore, it is a very critical market for marketers to utilize for marketing communication and platform providers and manufacturers of mobile devices which create and distribute the visual cues While the prevalent research on visual cue consumption focuses on the positive side, the dark side of consuming visual cues has not been investigated. Therefore, in this research, the dark side of using visual cues, such as difficulties and problems in their application, will be investigated. **Research design, data, and methodology:** Due to the nature of this study, a netnography approach was adopted. Twitter which the users regularly utilise visual cues in their communications was a prime source for data of this research. **Results:** This research suggests that visual cue users experience anxiety about the subordination of expression and suffer from the myth of an ideal practice of expression. **Conclusions:** As the previous research emphasised the complementary role of visual cues, has failed to recognise the problems associated with the extensive and growing dependence on visual cues. This awareness demonstrates that we need to take a careful approach to visual cue usage.

Keywords : Visual cue, Consumption of Visual Cues, Distribution of Visual Cues, Limitations

JEL Classification Code: D8, E2, E20

1. Introduction

The purpose of this research is to investigate difficulties and limitations that users of visual cues experience while applying these in a computer-mediated environment. Although the consumption of visual cues has been significantly increased, manufactures of mobile devices, marketers and platform providers such as Naver and Kakao which distribute the visual cues still have limited understanding on the consumption of the visual cues. By investigating the consumers' perception on the consumption of the visual cues, the manufacturers of mobile devices, marketers and platform providers would be able to have further understandings on it which can contribute to advance knowledge on creation and distribution of the visual cues. Visual cues are very popular in South Korea, where the word visual cue refers to all visual signs such as emojis and stickers. According to KakaoTalk, the most popular instant messaging service in South Korea, number of accumulative buyers of visual cues in the marketplace had already surpassed twenty million by November 2019. The popular mobile instant messaging applications such as KakaoTalk and Line which are also the platform providers have also opened offline retail shops to market their most popular character visual cues (Kim, Kim, & Lee, 2020; Shin & Joo, 2015).

With an increasing interest in using visual cues in daily communications through digital communication, previous research has investigated how visual cues have been utilized to express intended emotions, the influences on relationship development and the recipients' attitudes towards the message senders (Skovholt, Gronning, & Kankaanranta, 2014; Walther & D'Addario, 2001). Therefore, visual cue usage has been identified as a prime

1 First and Corresponding Author. Assistant Professor, College of Business, Ajou University, 206 Wordcup-ro, Yeongtong-gu, Suwon, Korea, Tel: +81-31-219-2726, Email: hchoi@ajou.ac.kr

vehicle for expressing desired emotions and intended meanings in social interactions (Tossell, Kortum, Shepard, Barg-Walkow, Rahmati, & Zhong, 2012; Kaye, Wall, & Malone, 2016). In the past, digital context-based communication suffered from a lack of complementary tools for the emotional expressions and communicative interactions inherent in face-to-face communications. In this regard, in digital context-based communications, the creation and wide distribution of visual cues have been seen as compensating for or negating the lack of non-verbal cues such as facial expressions and hand gestures (Derks, Fischer, & Bos, 2008; Walther & D'Addario, 2001). However, what remains unclear is whether consumers have the same level of understanding and receptiveness when they employ visual cues. Some previous research suggests that the positive role of visual cues is inconclusive, and users of visual cues often misinterpret them (Epley & Kruger, 2005). In addition, Danesi (2017) suggests that the employment of visual cues is a culturally embedded act; thus, different cultures may have different perceptions regarding the use of visual cues. Possibly, previous research that focused on the positive role of visual cues is based on research participants in Western societies; thus, Eastern societies with different cultural backgrounds and social norms, such as South Korea, would have different views on the employment of visual cues.

Most research has found that visual cues enhance online communications, emotional expression and the intent of the message-senders for recipients. In addition, the utilization of it can increase purchase intentions and consumer engagement (Bozaci, 2020; Casado-Molina, Rojas-de Gracia, Alarcon-Urbistondo, & Romero-Charneco, 2019; Choi, Zhang, & Chen, 2018; Das, Wiener, & Kareklas, 2019; Hooda & Ankur, 2018; Oh, 2017). Due to the dominant approach in the existing research paradigm, there is a less clear understanding as to whether consumers experience any difficulties when applying visual cues. The key purpose of this research is to investigate any limitations and negative perceptions that users of visual cues have. This study will offer further understanding about recent studies that have reported that using visual cues can be a source of miscommunication (Weissman & Tanner, 2018). Moreover, this research will be able to offer further understanding for the manufacturer of mobile devices, marketers and platform providers which create and distribute the visual cues for their customers. Therefore, this study sought to determine answers to the following questions.

1. What difficulties do consumers experience when employing visual cues?
2. To what extent are consumers resistant to the application of visual cue?

To investigate the research questions, netnography (Kozinets, 2015b) was a suitable option as it allows collecting and analyzing data in a digital environment. In the following section, first, the relevant literature will be reviewed, and then the methodology of this study will be discussed. Third, the research findings identified from analysis of the collected data will be presented, and last, concluding remarks will be provided.

2. Literature Review

Visual cues have been popularized as communication methods on the internet and on digital devices such as smartphones and tablets. They are widely used on social media sites such as Instagram and mobile chat sites such as Line and KakaoTalk and it is reported that more than 90% of the internet users employ visual cues in their digital communications (Das et al., 2019). Oxford Dictionaries announced that the emoji with a 'Face with Tears of Joy' was the 'Word' of the Year in 2015. In an environment of computer-mediated communications (CMC), visual cues have become important in expressing and exchanging sentiments, emotions and thoughts. Visual cues are now perceived as essential tools for expressing and delivering emotions and the intent of the message, which used to be a problem in digital context-based communications (Kaye et al., 2016; Konrad, Herring, & Choi, 2020).

Previous research has suggested that visual cues represent the users' emotions and can clarify message meaning, with uses varying according to cultural backgrounds (Park, Baek, & Cha, 2014). In addition, visual cues have been found to make messages more dynamic and friendly and most often as expressing a positive attitude (Skovholt et al., 2014; Prada, Rodrigues, Garrido, Lopes, Cavalheiro, & Gaspar, 2018). Visual cues were therefore developed to fill a void in CMC environments that suffered from a lack of vital communication cues such as body gestures (Crystal, 2001). In social interactions, as emotions are important for the development of social relationships and friendships, non-verbal cues contribute to the emotional understanding of the message content (Rezabek & Cochenour 1998; Walther & D'Addario 2001). Visual cues enhance the possibility of having friendly communications as they make CMC communication richer; moreover, when the valence of a visual cue is matched with a message, the effectiveness is increased (Rezabek & Cochenour, 1999). Other studies have suggested that the direct use of visual cues to express emotions is not a dominant practice (Dresner & Herring, 2010; Lour, Wu, Lu, & Tao, 2010). For instance, Luor et al. (2010) suggested that expressing emotions was not prevalent in their study as only 12% of the messages they examined used visual cues to express

emotion. Previous research provides that the uses of visual cues have communicative functions such as illocutionary force (Dresner & Herring, 2010). Skovholt et al. (2014) found that users mainly used visual cues to soften their tone in situations such as requests, rejections and complaints and to strengthen their messages in situations such as expressing thanks, greetings and appraisals.

However, research has found that enhancing meaning and emotion through visual cues in text-based communication has been inconclusive. Especially, it offers critical practical implications for mobile manufactures and instant message services which distribute visual cues through their devices and services. Epley and Kruger (2005) found that users were able to correctly identify emotions in written communication only half the time. In addition, it is reported that different platforms and devices represent the same sentiments in different ways and, more importantly how different people interpret the same visual cues varies. Therefore, interpretations of the same visual cues varied, and that some visual cues conveyed different meanings and emotions to different people. (Pavalanathan & Eisenstein, 2016). Senders' original meanings might be understood in different ways and, thereby, may fail to deliver the intended meaning because the rendering of emojis varies on different platforms and devices. The emoji itself is evolving as new emojis are created and adapted in platforms and devices. The result is a possibility that people will interpret visual cues differently and not necessarily in the way they were intended. Moreover, those who use emojis need to constantly learn the meanings of new emojis. This indicates that people who use different platforms and devices can be in situations of misunderstanding the meanings of emojis and failing to deliver appropriate visual cues that meet the context of the communication or the intended meaning. In turn, this might contribute to the emergence of difficulties and problems associated with the use of visual cues.

The implication is that a specific communication using visual cues may result in misconstrued messages between participants of communication in the digital space. Misconstruing happens not only in cross-platform communication in an environment where different platforms have different visual cues to present the same sentiments but also within-platform communication where the same visual cue is used for both senders and receivers (Pavalanathan & Eisenstein, 2016). Such studies offer understanding about the difficulties and problems users experience when applying visual cues. Therefore, interpreting the meanings of visual cues is not necessarily equitable for all users of this digital visual language (Jones et al., 2020). We need to understand that, like languages, people do not have an innate ability to understand and utilize all visual cues. The summary of key literature about the usage of visual cues is presented in Table 1.

Table 1: The Summary of Key Literature about the Usage of Visual Cues

Authors	Purpose of Research	Method	Key Findings
Dresner and Herring (2010)	To argue that emoticons are textual indicators of illocutionary force	Conceptual	Identified three functions of emoticon: emotion, nonemotional meanings and illocutionary force
Garrison et al. (2011)	To examine the usage of emoticons in their own right	Analyzed instant messages using grounded theory	Found integral and paralinguistic features of emoticons to the communicative act
Jassen et al. (2014)	To investigate the influence of emoticons on people's perception of intimacy	Experiments	Suggested that the usage of emoticons leads to increased perception of intimacy
Jones et al. (2020)	To investigate sex difference in emoji valence	Survey	Higher emoji usage and familiarity ratings for women than men
Lour et al. (2010)	To examine the usage of emoticons in the workplace	Exploratory experiment	The usage of emoticons can contribute to the generation of different emotional affects depending on the emotional expression of emoticons such as positive or negative
Kaye et al. (2016)	To understand the usage of emoticons on different text-based communications	Qualitative survey	Key reasons for the utilization of emoticons to aid emotional expression and to deliver meanings appropriately.
Novak et al. (2015)	To provide an emoji sentiment lexicon	Sentiment analysis	Most emojis indicate positive emotional status
Prada et al. (2018)	To understand the attitudes and motives of the usage of visual cues	Web survey	Found positive attitudes toward emoji usage, especially for women and younger generations

3. Research Methods

To investigate the research questions, netnography was deemed a suitable option. Netnography, introduced by Robert Kozinets, is an ethnographic research approach used in the digital space to understand social interactions and cultures in a computer-mediated environment (Kozinets, 2002, 2015b). According to Kozinets, "the foundation of netnography lies in value of taking a cultural approach to understanding what happens on the internet in general and, particularly, what happens through interactive media such as social media. For the purpose of netnography, a cultural insight involves an understanding of cultural elements such as language use, rituals … values … meanings" (2015a, p. 655). Netnography allows the collection of various forms of digital information, including photos, videos, and texts (Kozinets, 2002). The key limitation of netnography is 'loss of context' (MKono, 2011, p. 255), such as the demographics of social media users including age, gender, and education.

Research methodology that utilizes digital data can be divided into qualitative and quantitative methods. Each approach has its own advantages and values (Kozinets, 2015b). Qualitative research can be a valuable approach when researchers want a detailed understanding about a phenomenon being studied and to explore its meanings (Cho & Kim, 2012; Lee & Hong, 2019). Quantitative analysis, such as big data analysis, can be an invaluable method for testing theories (Lee & Lee, 2020; Park & Javed, 2020). Due to the nature of this research, a qualitative research tradition is adopted as it enables a deeper understanding of meanings and is an appropriate approach for exploratory research.

Data were collected from Twitter to understand how regular users of digital communication media perceive visual cue use. Therefore, this research aimed at gaining a rich understanding of how people regard visual cues in general, as well as what concerns they have in terms of the employment of visual cues in digital interactions, rather than observing and analyzing actual usages of visual cues in social media. The Twitter website was used as the prime source for this research because Twitter is regarded as a digital communication service wherein users regularly use visual cues, and is a digital place where people need to precisely express their opinions or thoughts not only using texts but also utilizing visual cues (Dunlap & Lowenthal, 2009). Users' activities on Twitter are stored and publicly accessible, allowing researchers to obtain meaningful information for the phenomenon being investigated (Miller, 2011). In addition, "as a relational, networked cultural environment, Twitter is particularly well-suited to research into situated knowledges" (Stewart, 2017, p. 254). Therefore, Twitter was used as the primary source for this research rather than the research object as Rogers (2013) suggested in his paradigm of digital methods.

This research is therefore indebted from the emerging methodological paradigm, digital methods, that was developed by Richard Rogers (2013). Rogers (2013) argues that digital space should not be limited in the sites for research rather it needs to be considered as source for research. The view rejects the dichotomy between the real and virtual. In this regard, Rogers proposes that "the issue no longer is how much of society and culture is online, but rather how to diagnose cultural change and societal conditions by means of the Internet" (2013, p. 21). Based on this view, the Internet is no longer only accepted as an object of study but it can be utilized for methodological and data sources for research to understand not only digital culture and its impacts on society and people but also broader social changes and cultural transitions.

Relevant tweets were collected manually from the Twitter website using terms such as emoticon, emoji and stickers from January 2015 to July 2016. Tweets that mentioned 'emoticon', 'emoji', or 'stickers' in Korean were searched, and each tweet was examined for its suitability to this research. From this, 638 relevant tweets were manually selected, collected and analyzed using a qualitative thematic data analysis approach (Dey, 1993). Kozinets suggests that "netnography is a technique of small data search and analysis, of human scale readings of other human groups, people and practice" (2015b, p. 175). For example, in the study of food tourism in Zimbabwe, 41 online tourist reviews were collected and analyzed (MKono, 2011). In term of netnography, Logan points out that "the amount and type of data collected varies and is largely dependent on the nature of the phenomenon of interest. Once data saturation is reached … this is usually a good indication that enough data has been collected" (2015, p. 379). After collecting 638 tweets for this research, no new understanding emerged; thus, we concluded that data saturation was reached. The key benefits of a qualitative thematic data analysis approach are creating and connecting categories (Belk, Fischer, & Kozinets, 2013; Dey, 1993). This allows researchers to gain detailed understandings and rich interpretations of research contexts rather than achieving generalization of an entire population (Belk et al., 2013). Automated data mining, big data analysis and content analysis can form a valuable approach. However, as Kozinets (2017) argues, "it runs the risk of missing some of the most interesting contextualized cultural components of online social phenomena" (p. 389). Before the actual analysis, each tweet was read several times, from which initial themes were developed. Next, each theme was re-examined to identify further sub-themes within each thematic category, which was an iterative

rather than a linear process (Glaser & Strauss, 2008). Table 2 illustrates the data structure of the data analysis of this research.

Table 2: The Data Structure of Findings

Aggregate Dimension	First-Order Theme	Second-Order Concept
Anxiety	Dominance of expression	• Heavy reliance on visual cues • Lack of competency in written communication
	Seeking a cautionary approach	• Moderating the usage of visual cues • Pursuing the value of communication with visual cues
Illusion	Deficiency in transmitting expression	• Disconnection between true emotions and the visual cues • Imperfection of visual cues
	Source of ambiguity	• Having doubts about the correct transmission • The risk of misinterpretation • The risk of misunderstanding

4. Findings

4.1. Anxiety about the Subordination of Expression

The analysis suggested that employing and circulation of visual cues in instant messaging communications were popular because they were easy to use and could give an instant expression of emotions. However, there was a fear that visual cues could result in a subordination of expression as twitter users felt that they were losing the ability to express themselves without using visual cues. Because of the realization that the visual cues could rule their expression, these users tended to have a cautionary approach and a resistance to subordination.

Many Twitter users confessed that they relied heavily on visual cues to express and deliver their emotions and sometimes only used visual cues when communicating digitally. However, this did not mean that they did not have a consciousness about their reliance on visual cues. Some Twitter users understood that their lack of competency in written communication to articulate their emotions or messages came from a lack of practice. One Twitter user explained that

> *After relying on emoticons, I became lazy about finding words which would accurately express my emotions and sensed a noticeable decline in my level of my expressiveness. As if my language abilities have regressed from text to symbols. (29/09/2015)*

For instance, a Twitter user was aware that the excessive use of visual cues meant that he or she was unable to properly express and deliver emotions or moods without using visual cues, and an extreme dependence on them to express emotions meant that text-based communications without visual cues would not properly express how he or she was feeling.

Although the consumers of visual cues were aware of their reliance on visual cues and understood that they needed to overcome this addiction, they felt that now it was the only way they knew to express their emotions in a CMC environment.

> *I can't stop using emoticons as I wouldn't know what was being expressed through my emotions if I didn't use them. (24/05/2016)*

This example shows that emotional expression and delivery has now been replaced and is dominated by the application of visual cues rather than by users attempting to articulate the meanings of communication using text-based conversation. The understanding that visual cues contributed to transmitting emotional tones by replacing the role of non-verbal cues in textual interactions in a digital environment was previously discussed in a study of Walther's Cues-filtered-in approach (Walther & Parks, 2002). This domination of emotional expression using visual cues often resulted in a side effect whereby Twitter users' entire emotional communication and articulation was operationalized within the scope of the available visual cues:

> *I feel as though after a certain point, I began to structure the emotions boiling up inside me through KakaoTalk emoticons. (24/05/2016)*

As visual cues are convenient to easily express emotions, many people used them excessively; a reliance that could lead to a loss of language competency. Although some users were aware of these risks, they felt that they were unable to escape from this dependence because it was easy and they were accustomed to using visual cues when communicating with others digitally. The growing availability of visual cues and the rising dependence of our daily communications on the digital space mean that many people are relying on visual cues to express their emotions and deliver their personal thoughts, which can stifle imagination and creativity and lead to a standardization of expressions. Therefore, over time, people's individualism

would be subdued and emotional expressions would become somewhat standardized as only the emotions and sentiments within the available options on devices or mobile messenger services could be used.

The realization of the reliance on and subjugation to using visual cues for personal expression to increase the clarity of the conversation provoked a cautionary approach in many users so as to resist a complete dependence on visual cues in their digital interactions. Users explicitly acknowledged that they were aware of their dependence in their communications with others and were willing to moderate the authoritative power of the visual cues on their personal expression:

> *Ah, I want to be honest in expressing my emotions without emoticons. (01/04/2015)*
> *Instead of using emoticons, I'm trying to express myself through writing that portrays emotion, but it's not as easy as it seems. Anyhow, I'd like to refrain from using emoticons as much as possible. (14/07/2015)*

They felt that, without applying visual cues in their digital communication, it has become very difficult to articulate and deliver their emotions and thoughts. Although they understand the difficulty, they consider that delivering emotions or moods depending entirely on using visual cues is not genuine, and that text-based communication is a more appropriate form for delivering authentic feelings.

In this regard, many Twitter users said that they did not understand why people expressed their emotions using visual cues rather than words. Some claimed that they disliked people who expressed their emotions or sentiments using mostly visual cues in conversations using pictorial images.

> *I wonder if I'm the only person who doesn't like receiving just a sticker or emoticons as a reply on KakaoTalk. Although I think people send it because the expressions it creates expresses emotions better…(29/092015)*
> *I don't understand the common phenomenon on KakaoTalk where people intentionally make grammatical errors and use emoticons. Do people consider ordinary sentences inadequate for expressing emotion? I just don't get it. (22/06/2015)*

Many users have become concerned about the dominance of visual cues for transmitting emotions and moods. In this sense, they highly value text-based communication for the delivery of emotions in an era when the application of visual cues has become the norm in CMC environments.

In contrast, some users said that although they were no longer willing to use visual cues or at least were going to reduce their obsession, they acknowledged that expressing emotions without visual cues was extremely challenging as previous research has found that visual cue usage contributed to the delivery of emotional intent and discourse (Rezabek & Cochenour 1998; Walther & D'Addario 2001). However, some users said that they realized the value of plain expression in the age of visual cue overuse and restricting visual cue employment was necessary to reclaim their ability to express themselves with originality and imagination:

> *I've decided to refrain from using emoticons for now. Even if it makes me seem stoic. I want to focus on using language as a way to deliver emotions. (05/12/2015)*
> *Something I've realized since I began using Telegram again was how I can no longer fully express my emotions without emoticons. With that said, I've banned myself from using emoticons. (02/03/2016)*

4.2. Illusion of an Ideal Practice of Expression

The identified second theme was based on the myth that using visual cues to interact with others in a digital communication environment enabled ideal expression. The findings under this theme were that unlike the general understanding about applying visual cues to replace non-verbal cues and to transmit emotions, visual cues did not often function as expected. Some Twitter users claimed that visual cues were unable to transmit expressions properly and were often ambiguous.

Although the use of visual cues can offer a supportive role in transmitting the emotional intent of text-based communication, the findings in this section showed that visual cues were unable to replace all expressions used in social interactions or perform the same as face-to-face interactions. Some users claimed that they were often unable to express their true feelings using visual cues and that there was a disconnection between their true emotions and the visual cues:

> *Although I intentionally used emoticons such as :) or :(, it is difficult to express every emotion through an emoticon. (12/05/2016)*
> *No emoji can express my tears. There needs to be a more appropriate emoticon. (09/05/2016)*
> *Come to think of it, I wonder why an iPhone emoji for expressing heartfelt weeping or sobbing doesn't exist. (23/06/2015)*
> *Ah… there are no emoticons to convey my current feelings. (27/02/2015)*

Comments show that the complete replacement of emotional expressions by visual cues instead of text is not feasible and point to the insufficiency and inadequacy of visual cues for expressing emotions and delivering moods properly. This suggests that visual cues are not able to express all emotional expressions and they sometimes failed to capture authentic feelings and emotions. One Twitter user told of her experience when communicating with her nephew:

According to my niece, "Auntie, I don't feel any emotion from your phone conversations. You're like a robot. You give short answers and don't use emoticons. I don't understand." [I replied] "emoticons don't explain one hundred percent of your emotions. Sometimes you send them as if you're acting a role in a play." (14/05/2016)

Her comment suggests that visual cues cannot be an ultimate alternative method for social conversation; instead, they can interrupt genuine expression and be a means of projecting a selective self (Chen, 2016).

Previous research has suggested that visual cues were an effective tool for expressing emotions and reducing conversational ambiguity in a digital communication environment as they could replace non-verbal cues such as facial expressions and gestures that have been recognized as essential to interactions (Kaye et al., 2016). However, for certain social interactions, visual cues should not be encouraged as emotions cannot be transmitted as expected (Derks et al., 2008; Kaye et al., 2016). These findings suggest that in general, users had doubts as to whether visual cues were sufficient when seeking to express emotions and reduce ambiguity.

In a similar vein to the findings in the previous section, visual cue users felt that visual cues could cause ambiguity and had doubts that these visual cues would be correctly interpreted. Apart from the lack of completeness discussed in the previous section, it was found that as visual cue interpretation can vary between users, emotional intent could not be accurately transmitted and the full understanding of the discourse was not guaranteed. According to previous research, many people have experienced difficulty in identifying emotions in written communication (Kruger, Epley, Parker, & Ng, 2005) and the interpretation of visual cues differed between people. Twitter users spoke of previous experiences where they had misinterpreted or lacked the ability to interpret certain visual cues on Twitter:

I thought this emoji represented a high-five or prayer, but it turns out it means "thank you". (16/04/2015)

^)ㅅ(^ Isn't this emoticon easy to misunderstand? I thought it was a satisfied person with full cheeks from stuffing something in his mouth. (04/07/2016)

Further, misinterpretation often caused misunder standings in the communication and increased the emotional ambiguity. It was found that visual cue usage and interpretation was culture bound, meaning that as people of different cultural backgrounds and nationalities may have different understandings regarding the visual cues, there would be higher level of misunderstanding. According to Park et al. (2014), visual cue use varies depending on the specific cultural background of the users and this can cause misrepresentations of particular visual cues and misunderstandings of the emotional intent in the discourse:

I use the emoticon >< the way I use >ㅁ< but in Japan it's an emoticon for polite putting two hands together…… on many occasions I was startled to see >< in a concerned Tweet. (29/01/2015)
In a DM with an British person I used to share that I was nervous and the person said… this is a symbol for sweat which only men tend to use…;; I immediately said oh really? I didn't know! Thanks! But um… (05/09/2015)

The problem with visual cue usage was not only because of the different user interpretations but was also based on the integral ambiguity in some visual cues:

Although it may seem obvious, I find it memorable that the types of emojis that are commonly used amongst people are the ones that don't portray clear emotions. Emojis that are crying while laughing or of covering one's mouth; these emoticons are ambiguous with a lot of room for interpretation for senders and receivers. (07/08/2015)

Visual cue ambiguity was also related to the technical limitations experienced when transmitting visual cues between differently branded devices. Previous research has also reported that certain visual cues in certain devices appear differently and have different meanings (Pavalanathan & Eisenstein, 2016). Therefore, if someone sends an visual cue to represent a certain emotion using a Samsung smartphone to a recipient who uses an Apple smartphone, on the recipient's device the visual cue would be presented differently and possibly transmit a different emotion; a compatibility problem that Twitter users seemed to be quite aware of:

Something that makes me hesitant about using emoticons is how it appears differently on different phone models and may deliver a different meaning…

I once sent my friend an expressionless emoticon but on my friend's phone it appeared as an angry emoticon. (23/02/2015)
Something that worries me whenever I use emoticons is how it looks different on each phone model… I use the emoticon to better convey my emotion but it appears weird on the recipient's phone. (01/05/2016)
The reason I hesitate from using emojis on Twitter is… some hearts appear as a hairy heart on other people's phones. (14/04/2016)

Due to issues of ambiguity and compatibility, users often hesitate to apply visual cues, and they seriously concern the correct transmission of emotional status and contextual meanings since visual cues can be interpreted differently and are a potential source of misrepresentation and misinterpretation. Because of previous frustrating experiences, visual cue users called for a unification of visual cues so that specific visual cues are identically presented across different devices and platforms.

5. Implications and Limitation

This research examined the difficulties and limitations users experienced when consuming visual cues and while identifying visual cue usage resistance. Visual cues such as visual cues or emojis function as non-verbal elements to assist users in expressing their emotions and thoughts and develop their social relations (Janssen, IJsselsteijn, & Westerink, 2014; Tang & Hew, 2019). Because of these apparent benefits, many people now rely heavily on visual cues when communicating in the digital environment and sometimes people use only visual cues in their messages. This research was initiated on the basis of the assumption that although visual cues are now extensively applied in everyday online conversations, the problems related to visual cue usage have not been critically examined. Therefore, compared to previous research (e.g. Derks et al., 2008; Kaye et al., 2016), the findings in this paper offer important theoretical and practical implications.

The first theoretical implication is that it was found that visual cue users did not fully accept the positive effects of visual cue usage and expressed anxiety about the subordination of their personal expression. Because visual cues are easy to use, people use them excessively to express their feelings and increase discourse clarity (Novak, Smailovic, Sluban, & Mozetic, 2015). However, such dependence could lead to the inability to express emotions and thoughts without using visual cues, which could have a snowball effect whereby the loss of competency in crafting written communication without visual cues leads to an even heavier reliance on visual cues. This would eventually limit people's emotional and communicative ability to the availability and the scope of the visual cues further denuding the ability to creatively and originally articulate their emotional status and intent. Finally, the reliance on visual cues could lead to a standardization of expression.

Second theoretical contribution is that it was found that visual cue usage did not always contribute to the development of social relations, which was contrary to the findings in previous research. Users in this research felt that using visual cues often increased ambiguity in their communication. Previous research had already highlighted that in certain social situations such as task-oriented or professional communication, using visual cues was inappropriate and ineffective (Derks et al., 2008; Kaye et al., 2016). It was found that some people resisted using visual cues and that visual cue use could negatively affect social relationships. Unlike previous research which found that visual cue usage enhanced the understanding of contextual information and was similar to the non-verbal cues offered in face-to-face communications (Derks et al., 2008), this research offers that visual cues use often caused confusion and ambiguity as the same visual cues could have different interpretations due to cultural differences and device mismatches.

Lastly, this research suggested that the research approach that has focused on the complementary role of visual cues and the practice of visual cue use has failed to recognize the problems associated with the extensive and growing dependence on visual cues. This awareness demonstrates that we need to take a careful approach to visual cue usage and that we need to further research the disconnection between visual cue use and the transmission of accurate emotions or intent. Understanding such problems associated with visual cue usage could offer further understanding regarding the appropriate utilization of digital languages for consumers, platform providers and creators.

Practical implication of this research is that the findings offer critical implications for marketers and creators of visual cues. The transition of visual cues to stickers shows that the focus has been the explicit delivery of emotions or moods of users rather than transmitting accurate contextual meanings (Konrad et al., 2020; Wang, 2016). As a result, the transition has centered mainly on the improvement of convenient ways to deliver emotions or moods instantaneously. Thus, manufacturers of mobile devices, marketers of platform providers such as Line and KakaoTalk and creators of visual cues should be aware that their key role should be as a supportive feature of online communication. They need to be careful about creating and distributing new visual cues that may subordinate users' genuine expressions. This requires marketers and creators of visual cues to focus on their development and platform

systems in a way that encourages the effective transmission of contextual meanings and genuine expressions. For manufacturers of mobile devices, platform providers, the selection and distribution of visual cues should be based on clarity of meaning and the intent of the transmission. In addition, this research offers critical implications for advertisers and practitioners in marketing communication as the application of visual cues in advertisements and promotional communications has expanded, and their relevant use can increase purchase intentions and consumer engagement (Bhandari & Bansal, 2018; Casado-Molina et al., 2019; Cha & Kwon, 2018; Choi et al., 2018; Das et al., 2019; Hooda & Ankur, 2018; Kim & Park, 2020; Oh, 2017; Won & Kim, 2020). Therefore, managers need to use visual cues effectively as they can offer a negative effect when used inappropriately (Li et al., 2018).

This research has a couple of limitations. First, the nature of the data is limited regarding the amount of data, the place of data collection, and the time of data collection. Therefore, future research using different methodological approaches such as big data analysis, survey research, and qualitative interviews will offer further in-depth understanding and/or different perspectives on the usage of visual cues in general and the negative perceptions towards the employment of visual cues specifically. Second, due to the nature of an exploratory study, the results cannot be generalized. However, the findings of this exploratory study can be a source for further research exploring the findings discussed here. To overcome the limitation, future research that utilizes quantitative analysis such as big data analysis is needed as it will be able to offer further quantified understandings of this issue.

6. Conclusion

This research investigates difficulties and limitations that users of visual cues experience when using such cues in digital interactions. Unlike previous studies that have focused on the supportive role of visual cues, our research shows that users often experience subordination of expression by relying heavily on visual cues as well as ambiguity caused by their imperfections and misinterpretations. Therefore, this study suggests that the employment of visual cues to deliver and distribute emotional intentions in the computer-mediated environment requires a cautious approach, and that users need to understand that, in social communication, visual cues cannot entirely replace the roles performed by verbal or textual communication. In addition, platform providers and businesses need to consider the aspects discussed in this research when they create and distribute visual cues to consumers. In particular, when businesses utilize visual cues to advertise their products and communicate with their customers in the digital space, they should identify relevant ways of applying these.

References

Belk, R., Fischer, E., & Kozinets, R. (2013). *Qualitative consumer & marketing research.* London, United Kingdom: SAGE.

Bhandari, R. S., & Bansal, S. (2018). Prospects and challenges of social media marketing: Study of Indian management institutes. *Journal of Business Economics and Environmental Studies, 8*(4), 5-15. https://doi.org/10.13106/eajbm.2018.vol8.no4.5

Bozaci, I. (2020). The effect of boredom proneness on smartphone addiction and impulse purchasing: A field study with young consumers in turkey. *Journal of Asian Finance, Economics and Business, 7*(7), 509-517. https://doi.org/10.13106/jafeb.2020.vol7.no7.509

Casado-Molina, A. M., Rojas-de Gracia, M. M., Alarcon-Urbistondo, P., & Romero-Charneco, M. (2019). Exploring the Opportunities of the Emojis in Brand Communication: The Case of the Beer Industry. *International Journal of Business Communication.* Retrieved from https://journals.sagepub.com/doi/full/10.1177/2329488419832964

Cha, Y., & Kwon, Y. (2018). Why Korean young women consumers buy luxury goods? The influence of cultural orientation and media use. *Journal of Business Economics and Environmental Studies, 8*(2), 23-32. https://doi.org/10.13106/eajbm.2018.vol8.no2.23

Chen, C. (2016). Forming digital self and parasocial relationships on YouTube. *Journal of Consumer Culture, 16*(1), 232-254. https://doi.org/10.1177%2F1469540514521081

Cho, J., & Kim, B. (2012). Knowledge management strategy of a franchise business: The case of a Paris Baguette Bakery. *Journal of Distribution Science, 10*(6), 39-53.

Choi, N., Zhang, J., & Chen, C. (2018). Store's visual sensory cues, emotion, and reusage intention. *Journal of Distribution Science, 16*(2), 35-45. https://doi.org/10.15722/jds.16.2.201802.35

Crystal, D. (2001). *Language and the internet*. Cambridge, United Kingdom: Cambridge University Press.

Danesi, M. (2017). *The semiotics of emoji*. New York, NY: Bloomsbury.

Das, G., Wiener, H. J. D., & Kareklas, I. (2019). To emoji or not to emoji? Examining the influence of emoji on consumer reactions to advertising. *Journal of Business Research, 96*(March), 147-156. https://doi.org/10.1016/j.jbusres.2018.11.007

Derks, D., Fischer, A. H., & Bos, A. E. R. (2008). The role of emotion in computer-mediated communication: A review. *Computers in Human Behavior, 24*(3), 766-785. https://doi.org/10.1016/j.chb.2007.04.004

Dey, I. (1993). *Qualitative data analysis: A user-friendly guide for social scientists*. London, United Kingdom: Routledge.

Dresner, E., & Herring, S. C. (2010). Functions of the nonverbal in CMC: Emoticons and illocutionary force. *Communication Theory, 20*(3), 249-268. https://doi.org/10.1111/j.1468-2885.2010.01362.x

Dunlap, J. C., & Lowenthal, P. R. (2009). Tweeting the night away: Using Twitter to enhance social presence. *Journal of Information Systems Education, 20*(2), 129-135. https://aisel.aisnet.org/jise/vol20/iss2/2/

Epley, N., & Kruger, J. (2005). When what you type isn't what they read: The perseverance of stereotypes and expectancies over e-mail. *Journal of Experimental Social Psychology, 41*(4), 414-422. https://doi.org/10.1016/j.jesp.2004.08.005

Garrison, A., Remley, D., Thomas, P., & Wierszewski, E. (2011). Conventional faces: Emoticons in instant messaging discourse. *Computers and Composition, 28*(2), 112-125. https://doi.org/10.1016/j.compcom.2011.04.001

Glaser, B. G., & Strauss, A. L. (2008). *The discovery of grounded theory: Strategies for qualitative research*. London, United Kingdom: AldineTransation.

Hooda, A., & Ankur (2018). Acceptance of social media as a marketing tool: A quantitative study. *Journal of Business Economics and Environmental Studies, 8*(3), 5-12. https://doi.org/10.13106/eajbm.2018.vol8.no3.5

Janssen, J. H., IJsselsteijn, W. A., & Westerink, J. H. D. M. (2014). How affective technologies can influence intimate interactions and improve social connectedness. *International Journal of Human-Computer Studies, 72*(1), 33–43. https://doi.org/10.1016/j.ijhcs.2013.09.007

Jones, L. L., Wurm, L. H., Norville, G. A., & Mullins, K. L. (2020). Sex differences in emoji use, familiarity, and valence. *Computers in Human Behavior, 108*(July), 106305. https://doi.org/10.1016/j.chb.2020.106305

Kaye, L. K., Wall, H. J., & Malone, S. A. (2016). Turn that frown upside-down: A contextual account of emoticon usage on different virtual platforms. *Computers in Human Behavior, 60*(July), 463-467. https://doi.org/10.1016/j.chb.2016.02.088

Kim, H., Kim, H., & Lee, M. (2020). An empirical study of the Korean telecommunication market and IoT Smart Home: Effects of Bundling Strategy on Consumers' Responses. *Journal of Distribution Science, 18*(5), 15-23. https://doi.org/10.15722/jds.18.5.202005.15

Kim, W., & Park, H. (2020). The effect of image search, social influence characteristics and anthropomorphism on purchase intention in mobile shopping. *Journal of Industrial Distribution & Business, 11*(6), 41-53. http://dx.doi.org/10.13106/jidb.2020.vol11.no6.41

Konrad, A., Herring, S. C., & Choi, D. (2020). Sticker and emoji use in facebook messenger: Implications for graphicon change. *Journal of Computer-Mediated Communication, 25*(3), 217-235. https://doi.org/10.1093/jcmc/zmaa003

Kozinets, R. (2002). The field behind the screen: Using netnography for marketing research in online communities. *Journal of Marketing Research, 39*(1), 61-72. https://doi.org/10.1509%2Fjmkr.39.1.61.18935

Kozinets, R. (2015a). Netnography. In R. Mansell & P. H. Ang, *The international encyclopedia of digital communication and society* (pp. 653-660).

Kozinets, R. (2015b). *Netnography: Redefined*. London, United Kingdom: SAGE.

Kozinets, R. (2017). Netnography for management and business research. In C. Cassell, A. L. Cunliffe & G. Grandy, *The SAGE handbook of qualitative business and management research methods* (pp. 384-397). London, United Kingdom: SAGE.

Kruger, J., Epley, N, Parker, J., & Ng, Z. (2005). Egocentrism over email: Can we communicate as well as we think? *Journal of Personality and social Psychology, 89*(6), 925-936. https://doi.org/10.1037/0022-3514.89.6.925

Lee, H., & Hong, S. (2019). Revisiting of greenness to consumers in green purchases. *Journal of Distribution Science, 17*(10), 107-114. https://doi.org/10.15722/jds.17.10.201910.107

Lee, S., & Lee, H. (2020). A study on the smart tourism awareness through bigdata analysis. *Journal of Industrial Distribution & Business, 11*(5), 45-52. http://dx.doi.org/10.13106/jidb.2020.vol11.no5.45

Li, X., Chan, K. W., & Kim, S. (2019). Service with emoticons: How customers interpret employee use of emoticons in online service encounters. *Journal of Consumer Research, 45*(5), 973-987. https://doi.org/10.1093/jcr/ucy016

Logan, A. (2015). Netnography: Observing and interacting with celebrity in the digital world. *Celebrity Studies, 6*(3), 378-381. https://doi.org/10.1080/19392397.2015.1062652

Lour, T., Wu, L., Lu, H., & Tao, Y. (2010). The effect of emoticons in simplex and complex task-oriented communication: An empirical study of instant messaging. *Computers in Human Behavior, 26*(5), 889-895. https://doi.org/10.1016/j.chb.2010.02.003

Miller, G. (2011). Social scientists wade into the tweet stream. *Science, 333*(6051), 1814-1815.https://doi.org/10.1126/science.333.6051.1814

MKono, M. (2011). The othering of food in touristic eatertainment: A netnography. *Tourist Studies, 11*(3), 253-270. https://doi.org/10.1177%2F1468797611431502

Novak, P. K., Smailovic, J., Sluban, B., & Mozetic, I. (2015). Sentiment of emojis. *Plos One, 10*(12). https://doi.org/10.1371/journal.pone.0144296

Oh, Y. (2017). The impact of initial eWom growth on the sales in movie distribution. *Journal of Distribution Science, 15*(9), 85-93. https://doi.org/10.15722/jds.15.9.201709.85

Park, J., Baek, Y., & Cha, M. (2014). Cross-cultural comparison of nonverbal cues in emoticons on Twitter: Evidence from big data analysis. *Journal of Communication, 64*(2), 333-354. https://doi.org/10.1111/jcom.12086

Park, Y., & Javed, Y. (2020). Insights discovery through hidden sentiment in big data: Evidence from Saudi Arabia's financial sector. *Journal of Asian Finance, Economics and Business, 7*(6), 457-464. https://doi.org/10.13106/jafeb.2020.vol7.no6.457

Pavalanathan, U., & Eisenstein, J. (2016). More emojis, less :) The competition for paralinguistic function in microblog writing. *First Monday, 21*(11). https://doi.org/10.5210/fm.v21i11.6879

Prada, M., Rodrigues, D. L., Garrido, M. V., Lopes, D., Cavalheiro, B., & Gaspar, R. (2018). Motives, frequency and attitudes toward emoji and emoticon use. *Telematics and Informatics, 35*(7), 1925-1934. https://doi.org/10.1016/j.tele.2018.06.005

Rezabek, L., & Cochenour, J. (1999). Visual cues in computer-mediated communication: Supplementing text with emoticons. *Journal of Visual Literacy, 18*(2), 201-215. https://doi.org/10.1111/jcom.12086

Rogers, R. (2013). *Digital methods*. Cambridge, United Kingdom: The MIT Press.

Shin, M., & Joo, J. (2015). Relationships between customer socialization, customer participation, and loyalty of on-line service providers. *Journal of Distribution Science, 13*(11), 15-22. https://doi.org/10.15722/jds.13.11.201511.15

Skovholt, K., Gronning, A., & Kankaanranta, A. (2014). The communicative functions of emoticons in workplace e-mails: :-). *Journal of Computer-Mediated Communication, 19*(4), 780-797. https://doi.org/10.1111/jcc4.12063

Stewart, B. (2017). Twitter as method: Using Twitter as a tool to conduct research. In S. Luke & A. Quan-Hasse, *The SAGE handbook of social media research methods* (pp. 251-265). London, United Kingdom: SAGE.

Tang, Y., & Hew, K. F. (2019) Emoticon, emoji, and sticker use in computer-mediated communication: A review of theories and research findings. *International Journal of Communication, 13*, 2457-2483.

Tossell, C. C., Kortum, P., Shepard, C., Barg-Walkow, LH., Rahmati, A., & Zhong, L. (2012). A longitudinal study of emoticon use in text messaging from smartphones. *Computers in Human Behavior, 28*(2), 659-663. https://doi.org/10.1016/j.chb.2011.11.012

Walther, J. B., & D'Addario, K. P. (2001). The impacts of emoticons on message interpretation in computer-mediated communication. *Social Science Computer Review, 19*(3), 324–347. https://doi.org/10.1177%2F089443930101900307

Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly, *Handbook of interpersonal communication* (pp. 529-563). London, United Kingdom: SAGE.

Wang, S. S. (2016). More than words? The effect of line character sticker use on intimacy in the mobile communication environment. *Social Science Computer Review, 34*(4), 456-478. https://doi.org/10.1177%2F0894439315590209

Weissman, B., & Tanner, D. (2018). A strong wink between verbal and emoji-based irony: How the brain processes ironic emojis during language comprehension. *Plos One, 13*(8). https://doi.org/10.1371/journal.pone.0201727

Won, J., & Kim, B. (2020). The Effect of Consumer Motivations on Purchase Intention of Online Fashion - Sharing Platform. *Journal of Asian Finance, Economics and Business, 7*(6), 197-207. https://doi.org/10.13106/jafeb.2020.vol7.no6.197