An examination of CMC theory and online relational communication through extra-linguistic signs

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Abstract

This paper examines how in a predominantly text based computer mediated communication （CMC） medium relational interaction can be achieved though the use of extra-linguistic signs such as emoticons and *emoji*. CMC theories look at how the missing online visual and audio cues that are found in face-to-face interaction can influence how or if relational communication can be achieved online. In a discussion of the American and Japanese extra-linguistic sign literature it is suggested that these unconventional depictions can play an influential part in not just expressing emotion but also in promoting intimate online relational dialogue. These signs are also influenced by the technology and culture from which they stem from and can act as conveyers of how the writer wishes to be perceived to their online readers.

【Keywords: CMC ／ Extra-linguistic signs ／ Relational communication ／ Emoticons】

Introduction

This paper will initially introduce the relatively new linguistic discipline of computer mediated communication （CMC） and the historical background of the field. This is followed by how online interaction differs to face-to-face communication （FTFC） and how CMC theory has drawn attention to this. These theories examine how this predominately text based medium that lacks visual and audio cues may have implications for online relational and interpersonal communication. Within the final sections of the paper a review of the history and development of the various online extra-linguistic signs in America and Japan will be examined with a discussion of the studies of how American and Japanese use these unorthodox signs as devices that fill in this perceived lack of visual and audio cues in an attempt at conveying online relational communication. The main areas this paper will address are:

How applicable is CMC theory to modern online communication?

and;

How is emotion and relational communication conveyed in a text-based environment void of visual and audio cues?

The field of CMC

The new field of CMC is still relatively new. It is a discipline that attracts a variety of scholars from different fields and has already generated a vast interdisciplinary research literature. Herring（1996）defines CMC as "communication that takes place between human beings via the instrumentality of computers"（p.1）. The term was introduced in the 1980s and gained popularity in the 1990s. A reputable journal of the same name was also launched, and the discipline is now growing nearly as fast as the computer technology and media that it aims to research. However, as Crystal（2011）states, the term may now be too broad from a linguistic point of view as it encompasses all forms of communication such as music, video, and photographs as well as language in the true sense of the word（p1-2）. The development of new forms of communication technologies such as mobile devices which can be used for mailing, use of social network services and blogging may also not fall under the term of 'computer' mediated in the traditional sense. Communication technologies have now moved beyond computer use. Mobile phones may now be considered 'on the move' computers but voice calls, and televised mediated conversation via text messages may sit awkwardly under the description of the computer.

An influx of new terms that have attempted to define the field, Baron（2004）suggests 'Electronically Mediated Communication'（EMC）, Thurlow & Mroczek（2011）put forward the term 'Digital Discourse'. For Crystal（2011）these terms remain too broad and subsequently blur the distinction between language and other forms of communication and proposes the name 'Internet Linguistics' to cover the scientific study of all manifestations of language in the electronic medium（p1-2）.

A universally accepted term, however, one that is not too narrow or broad, has yet to be decided. For the purpose of this paper 'CMC' will be used as the descriptive label paralleling Herring's（2013）thoughts that the term is based on established tradition and is currently the preferred choice among communication scholars.

CMC history

In her introduction to the book 'Pragmatics of Computer Mediated Communication' Herring（2013）states that the collection of papers within the book can be interpreted as the state of the art 'in an emergent field rather than as a distillation of time-honored knowledge'（p. 4）.

Similarly, Crystal（2005）writes that

> the emergence of a new branch of an academic discipline does not take place very often, but the arrival of the internet has had such an impact on language that I believe the time is right to recognize and explore the scope of a putative 'internet linguistics（p. 1）.

These observations suggest that even after a large body of research has been done within CMC, the scope and speed of change that technology provides, means there are still a lot of gaps within the research that have not been filled as this discipline continues to grow.

The advent of the Internet allowed millions of people to connect with each other online, and this connection led to people communicating with each other on a wide scale. In 1990, the Internet, devised by computer scientist Tim Berners-Lee, was originally a means of enabling high-energy physicists in different institutions to share information within their field. This then spread to other fields, and is now all-inclusive in subject matter, and designed for multimedia interaction between computer users anywhere in the world （Crystal, 2010）.

In the 1990's search engines started to appear enabling users to search for the material they needed, and in 1998 the now world famous 'Google' made its introduction. Along with these search engines and earlier functions that were transported into the web the exchange of information and communication became a lot easier. The web became a device for the transmission of written language online. It is this written language that has fascinated linguists from various disciplines and has gradually seen a body of work develop and is still developing.

CMC v FTFC

Time frame or chronemic time related messages differ according to the CMC platform the user is engaged in, synchronous communication as in chat rooms is done in real time whereas asynchronous CMC as in e-mail has no time constraints and the user can respond and interact at their leisure. However, when visual and audio equipment is not used CMC is basically a text based medium whereby the audio cues such as tone of voice, and visual cues, as in emotional expression, is difficult to convey in comparison to FTFC. This is essentially what makes CMC and FTFC different. The list below, although not exhaustive, gives a brief overview of the main differences CMC, in particular asynchronous communication, has with FTFC.

Online communication characteristics

1. Conversation can be asynchronous or synchronous
2. Visual or audio clues of the interlocutor are missing, which can mean:

    Rank, age, gender, position, and occupation of the interlocutor can be unknown （especially in anonymous communication）

    Appearance is unknown

    Voice is unheard
3. Communication is text based, which means:

    No Back channeling or aizuchi, interruptions or turn taking, false starts are not present. Emotion,

tone or nature of the message is difficult to interpret. A Possible result of this is 'flaming'

4．Conversations take place in a virtual rather than physical world

5．Easy access to communicate with people（known or unknown）on a global scale

CMC Theories

CMC Theories have been developed by various scholars to address how CMC and FTFC differ. These theories have addressed the issue of how interpersonal communication can or cannot be achieved because of the lack of visual and audio cues. Within FTFC, the use of non-verbal cues is regarded as a necessity for the correct interpretation of messages received and also how we convey messages to others.

In CMC due to the lack of these visual and auditory cues the true intention that the writer wishes to convey can often be difficult（Sugitani, 2006）and there are multiple theories of CMC that look specifically at how this missing non-verbal communication may have an influence on CMC users from a social-psychological perspective. The main theories fall into one of two camps. The cues filtered out and cues filtered in theories.

The cues filtered out theories are as Walther（2011）suggests a "group of theories sharing the premise that CMC has no non-verbal cues and therefore occludes the accomplishment of social functions that typically involve those cues"（p.445）. In other words, nonverbal cues such as tone of voice, facial and emotional expressions can enhance the warmth of online dialogue and interactions that lack these cues can lead to a cold and sometimes hostile online environment（Kiesler, 1986）. This first theoretical approach consisted of theories that make up what has been deemed the 'impersonal perspective' of CMC.

This perspective states that the lack of nonverbal or social cues diminishes CMC's ability to foster impression formation and management（Kiesler, 1986; Kiesler, et al., 1984; Short et al, 1976）. Short, Williams and Christie conceived the social presence theory, the first of the cues filtered out concepts, in 1976 long before the widespread use of the Internet as a communication tool. The basic premise of the theory state Spears & Lea（1992）is that "Social presence is conceived as a single factor that comprises a number of dimensions relating to the degree of interpersonal contact. It is closely related to the notions of 'intimacy' and 'immediacy'"（p.32）. Social presence is, therefore, to what extent the interlocutor is aware of the emotional state as represented in auditory and nonverbal cues of the person he is interacting with. In rating social presence Short et al.（1976）characterized whether communications media could be ranked according to their dimensions of unsociable-sociable, insensitive-sensitive, cold-warm, and impersonal-personal. These ratings suggested that media could be ranked according to a high or low social presence. If we extrapolate this data to electronic mail for example this communication medium would be low on this rating scale as it is a text based medium void of these nonverbal cues（Spears & Lee, 1992）.

The reduced social cues concept is another influential approach within CMC theory and unlike the social presence theory it is directly related to CMC. It parallels the social presence theory in that it states that

the absence of nonverbal cues can explain the social psychological effects linked with CMC. The theory examines the negative effects that a text based CMC void of socioemotive cues can have terming it the disinhibition effect. The disinhibition effect implies that as a result of the lack of cues that express roles, status and setting, hostility and flaming (the sending of offensive messages to people on the internet) are more frequent in comparison to a face-to-face environment (Kiesler, 1986 p.21). Spears, Lea, & Postmes (2001) suggest that the disinhibition effect is the consequence of slow and inefficient information exchange in CMC.

Regardless of the cues filtered out model's intuitive appeal these theories came under criticism as research from a larger variety of online settings were conduced which gave alternative perspectives and theories to this model.

These alternate perspectives, which can be described under the umbrella term 'cues filtered in' are as Walter & Parks (2002) points out theories that explicitly reject "the view that the absence of nonverbal cues restricts communicator's capability to exchange individuating information" (p.535). These theories insist that individual users can develop affinity with other users even though they may be denied these nonverbal cues that are readily available in face-to-face interaction. CMC users, the theories assert, can simply seek other ways to relay relational messages from the cues available in text based CMC. These studies, which offered a contrast to the cues filtered out approach, create what is known as the 'interpersonal perspective' of CMC.

Cues filtered in: the 'interpersonal perspective' of CMC

The Social Information Processing (SIP) model as proposed by Walther (1992) acknowledges that CMC is devoid of the nonverbal cues that are present in face-to-face interactions but that these do not hinder the development of relational communication online. The model implies that if CMC users interact with each other over time that social relationships will be formed. Walther (1992) writes "If the relational tone effects of the cues-filtered-out research are indeed limited to initial interactions among strangers, what changes take place when such communicators continue their interactions over time?" (p.67). The development of relationships in CMC, he argues, is dependent on the passing of time and sufficient message exchange. As nonverbal cues are absent this requires that users adept their interpersonal communication to whatever cues remain available through the channel they are using.

The SIP theory originally focused on language content and chronemic adaptations as methods to convey an interpersonal communication style. Through a series of studies conducted by Walther users are able to bypass the lack of cues through questions and disclosures (Tidwell & Walther, 2002), careful observation of chronemic cues, or the timing of communication, as in a swift versus slow reply and work or after work hours (Walther &Tidwell, 1995).

Walther (1992) suggests that 'other devices' can also be employed as strategies to enhance relationality

online. These devices I would suggest can include extra-linguistic signs. The theory did not specify however, that extra-linguistic signs such as emoticons or graphical symbols can act as devices that can promote interpersonal communication, and writing in 2011, Walter states that language and style content as more primary conduits of interpersonal information.

In an extension of the SIP model above, Walther（1996）suggests through his hyper-personal model that CMC message senders can depict themselves in a favorable light socially or otherwise in order to capture the attention of the person to whom the message is being relayed. This he argues can lead to friendly conversation that may surpass face-to-face conversation in terms of sociality. Message receivers may consequently enhance the image of the sender by overvaluing these text-based cues. In addition, in the case of asynchronous CMC the sender and the receiver of messages have enough time to edit their communication, making interactions in CMC more controllable and thoughtful in character. These edits are opportunities to review and revise their communications, which can further facilitate favourable self-presentation online（Walther, 1997）.

Walther（1996）suggests that the absence of these visual cues can make 'more malleable' the impression one is able to make'. The absence of a 'bad hair day', a bad choice of clothes are all absent in CMC interaction（p.20）. Impersonal impressions do occur in CMC（See Walther, 1993）but are channeled through the medium of language which as Ekman & Friesen（1969）point out can be subjected to control and editing rather than unconscious nonverbal behaviours. In other words, a self-selected presentation can occur online of how and who you want to project your identity as being. The focus now will look at the basic extra-linguistic signs that are available to both American and Japanese online users and the historic roots that they stem from with the following section linking CMC theory to extra-linguistic sign usage.

The emoticon: History and roots

Spatial arrays are techniques often employed by CMC users to draw pictures using the features available on the keyboard that are often visual representations of emotion. Examples of this are emoticons such as :-）smile and :-（frown or the upright（^_^）which is the basic smiley of Japan. Online emoticons, a phenomenon going back over 30 years, were also explicitly created with the goal of clarifying the writers intended meaning within their messages.

Scott Fahlman, a computer scientist at Carnegie Mellon University, first proposed a colon, hyphen and bracket as in :-）as a way of conveying emotional meaning via plain text.

Scott proposed the use of these series of markers for online bulletin boards at Carnegie Mellon University during the early 1980s. With sarcasm and humour often proving difficult to detect in text, Scott wanted to explicitly mark posts that were light hearted, resulting in the suggestion of :-）for humorous posts, and :-（for posts that were meant to be taken seriously.

Falhman suggests that the convention soon spread within Carnegie Mellon, and subsequently spread to

other universities and research labs via the primitive computer networks of the day. Within a couple of years other cultures started to embrace the emoticon or re-invented it according to their native language and the keyboard technology available.

Unlike the origins of the American emoticon it is difficult to pinpoint an exact time when the Japanese emoticon was introduced but what is often said is that the most popular and basic symbol（^_^）appeared in *pasokon tsuushin* around 1986.

According to the Japanese newspaper *Yomori Shinbun* written 10 December, 1994（cited in Katsuno & Yano, 2002, p.214）, *kaomoji* were placed after the senders name acting like a signature but then soon spread to the main text of the message and the variety and number of *kaomoji* increased rapidly around 1990 with the establishment of large network service companies such as NIFTY-Serve and PC-VAN.

The roots of some of the more basic Japanese *kaomoji* can be found to be originating from *manga* or Japanese comics. The examples below show the similarities of the expressions made by characters within manga and how *kaomoji* aim to reproduce similar facial expressions albeit on a much simplistic scale.

Figure 1 . Smiling emoticon[1]

^_^ or ^__^

Figure 2 . Tearful Emoticon[2]

Eyelids raised: smiling, happy

T_T or ;_;

Eye streams or drops: crying

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1   http://mypages.iit.edu/~jfas/articles/animeemoticons.html

2   http://tsukichanbaka.blogspot.jp/2011_10_01_archive.html

The typical western emoticons are written sideways as in :-) and as illustrated above the Japanese *kaomoji* or emoticons are written front facing or horizontally as in （ ＾ ＿ ＾ ）.Yuki et al（2007）suggest that the Japanese express their emotions through the eyes and that westerners tend to express their emotions mainly through the expression of the mouth.

The tables below illustrate the most commonly used *kaomoji* or emoticons in English and Japanese online text based communications. This is by no means an exhaustive list as the variety of *kaomoji* and emoticons are infinite with new ones appearing consistently.

The tables serve as an introduction to the types found in American and Japanese online interaction.

Table 1. *English Text Based Basic Emoticons*

:-)	The classic smiley face (happy, grin)	:-l	Indifferent
:)	The simpler variation	:-e	Disappointed
:-(	The frown（unhappy）	>:-<	Mad or angry
:-0	Surprise or shock	:-D	Laughing or very happy
:-@	Screaming or shouting	;-)	Smile with a wink（joking, kidding, or sarcasm）.

Table 2. *Japanese Text Basic Emoticons（Kaomoji）*

(^_^) /	Hi!	(>_<")	Ouch!
(^^)	Smile	(';')	A baby
(^O^)	Being glad!	(~o~)	A yawn
^_^;	Be in a cold sweat	<^_^; -	Embarrassed, scratching one's head
(/--) /	Oh no!	(/_;) /	Embarrassment
(;_;)	Cry and sob	（TOT）（T^T）	Endure by crying
(^_-) ---	Wink	m (._.) m	To bow

The above emoticons can be done in multiple ways on the keyboard of a home computer. However, with the growing mobile communications market in the last decade *kaomoji* can be inserted into your online communications even when you are away from your computer. With the advent of the smart phone what can be done on a computer can be equally achieved in these mobile devices.

Some *kaomoji* are pre-installed into Japanese *keitai's* or mobile handsets, and users can choose from an *emoji*（絵文字）or pictogram menu, a 記号 *kigou* or symbols menu and a 顔文字 *kaomoji* or emoticons menu.

This trend continued with the latest technology within the smartphone. Within some keitai and smart

phone interfaces a *kaomoji* menu is available where the *kaomoji* or emoticons are divided into their meanings such as 泣く *naku* to cry and some are attached to expressions or words which highlight their intended meaning as in the following examples.

（^-^*）／コンチャ！ **Meaning**: *An abbreviation of konnichiwa or hello.* **Function**: Used in greetings.
m（．＿．）mアリガト **Meaning**: *Arigatou* or thank you. **Function**: To express gratitude.
（^＿^）/~~ サヨナラ **Meaning**: *Sayonara* or goodbye. **Function**: Used in closings.

  These emoticons can be inputted manually on the computer keyboard and copy and pasted from an online *kaomoji* dictionary website. Western phones also have their equalivant emoticons pre-installed along with a variety of apps that can be uploaded. The variety of Western emoticons is now vast but the Japanese *kaomoji* which came a few years later is incredibly diverse in comparison. A reason for these differences stems from the word processing keyboard technology used in America and Japan specifically the one or two byte keyboard technology distinction.

  In American computers, every character is represented by a byte, a string of eight zeroes and ones, which allows 256 possible signs. Japanese computers on the other hand use two bytes for every sign, which allows enough combinations to be made to represent all the *Kanji*. There are 2,136 Jōyō *kanji* （commonly used *Kanji* or Chinese characters）. There are, therefore, a larger variety of emoticons in Japanese.

Table 3. *A Comparison of 1 Byte and 2 Byte Combinations / Letters*

1 byte letters**:**	ABCDabcd,.^=123456?+-*/=[]`@.......
2 bytes letters	あいうえおカキクケコ@１２３漢字♣♥〒♀♂ ゙∀≒ΩωЯφ♪

Adapted from Japanese Smileys（Emoticons）

Graphic Based Emotions or the Smiley

  The smiley is usually a yellow circular face, with black dots to represent the eyes, and the mouth shows the emotional expression of the face. With the advancement of computer technology some now have hand gestures attached to them, and now not all smileys are yellow with some in red to represent anger or rage. These graphic based emoticons evolved, or some may say mutated from the text based emoticon of Fahlman and can be seen frequently in synchronous or real time online communication such as chat rooms and messenger.

  The original "smiley face" was created by the designer Harvey Ball for the State Mutual Life Assurance Company. It has since become a ubiquitous symbol. It was adopted by acid house, which was a sub-genre

of house music developed around the mid-1980s and the design was widely used on buttons, badges and clothing, and has since become a lasting and recognizable international symbol. This smiley face preceded the Internet and its cousin, the computer smiley that can be described as its digital relation. The computer smiley increased in popularity with the advent of Instant Messenger and the 12 emoticons they were provided with within its interface – from kissing to crying – allowed users to convey a wide range of emotions with a simple click of the mouse.

As technology and online communication has evolved, so did the type and variety of smiley or graphic based emoticons, especially in the case of synchronous real time communication. Some are animated but the majority still remain as pictures and below are typical examples found in mobile handsets and within the interfaces of some CMC genres such as weblogs.

Figure 3. Examples of Current Graphic Emoticons

Instant messenger, an example of real time communication has built into its interface a menu of graphic emoticons or smiley's. In a survey among its users to celebrate the 25th anniversary of the emoticon in 2007, 82% of 40,000 respondents who use Yahoo messenger daily adopt these smileys or graphic emoticons in their daily instant messaging (IM) communications. Nearly two thirds (61%) of them said they rely on these emoticons to best express their feelings. 'Gen IM' or 'Generation Instant messengers' respondents from the ages of 19-25 were the most frequent graphic emoticon users and used them on a daily basis. However emoticon use according to this survey is not just the domain of the young with 48% of the over fifties responding that they use emoticons in their online Instant messaging communications.

Emoji

Emoji（絵文字）literally meaning 'picture letter mark', is a graphic picture or pictogram. These pictograms are numerous with a substantial variety that originally emerged in mobile phones. *Emoji* is the term that describes these 'picture characters' that are built into most Japanese and now western mobile handsets such as the original keitai and the latest smart phones.

The main differences between *emoji* and emoticons are that *emoji* are computer codes read and transferred by these computers and then decoded into pre-defined images that users can see and are limited in number to around 2000（Blagdon, 2013）.

Emoticons, in contrast, are user created text based images and the possible combinations are infinite. *Emoji*, as pictographs or pictograms depict images of faces, weather, activities and actions as illustrated in the table below.

Emoji was first introduced in Japan through the mobile communications network DoCoMo's i-mode by Shigeta Kurita (Blagdon, 2013). Their origin and invention was initially inspired by the pocket bell pager, which was a domestic hit in terms of sales and popularity in 1995. The usage of the heart symbol within the text that DoCoMo included on this device meant that millions of teenage kids could now express themselves in a new innovative way.

Figure 4. Emoji Variation

Windows 95 was launched with more pre-installed FEP technology and according to Kurita people were finding it hard to communicate with this new technological advancement and the shorter, more casual nature of e-mail lead to a breakdown in communication and in the words of Kurita: "If someone says *Wakarimashita* you don't know whether it's a kind of warm, soft 'I understand' or a 'yeah, I get it' kind of cool, negative feeling," says Kurita. "You don't know what's in the writer's head." (Blagdon, 2013, para. 4)

Emoji emerged from this in 1999. This now meant that the mobile phone user could now choose to include in their text and email messages these predefined pictograms to express additional meaning to the text. Kurita states that he drew inspiration from manga and *kanji* in the creation of these graphic depictions.

> In Japanese comics, there are a lot of different symbols. People draw expressions like the person with the bead of sweat, you know, or like, when someone gets an idea and they have the light bulb. So there were a lot of cases where I used those as a kind of hint and rearranged things. (Blagdon, 2013, para. 7)

Within this backdrop *emoji* soon spread with all mobile communication companies installing them in their mobile communication devices. Although this spread was initially limited to Japan other countries and telecommunications companies followed suit.

The i-Phone initially had no *emoji* pre-installed, and many Japanese companies rejected the i-Phone on this premise（Blagdon, 2013）. However, the i-Phone was adopted by Softbank, Japan's then 5th largest mobile operator, on the condition that *emoji* were pre-installed. However, outside of Japan *emoji* are also gathering popularity. One of the most popular free i-phone downloads in America in 2010 was the application *emoji* free and writing in 2015 *Emoji* are also pre-installed in American smartphones with the latest IOS ８.３ update including African American skin tones and characters.

CMC theory and extra-linguistic signs

The cues filtered out model has been largely rejected within CMC research. Walther（1992）points out that it may simply take longer to achieve the same degree of content exchange in CMC than in face-to-face communication and that this may be the cause of task orientated rather than social orientated communication styles. Walther, Anderson ＆ Park（1994）dispute early research that states that CMC is unable to convey relational dynamics and suggest that time limitations within CMC are the primary causes for their findings. In other words, "CMC takes a great deal longer than face-to -face interaction to accomplish more than simple data transfer"（Walther et al; 1994.p.80）. They suggest that alternatively CMC users develop 'individuating impressions of others' through the accumulation of interaction within the online environment. The history and root of extra-linguistic signs within Japanese and western online communications suggest that they were created for the intention of replicating the missing emotional visual and audio cues that are absent in most forms of CMC.

In addition to expressing emotion, it can be suggested that these signs can also be used to develop these 'individuating impressions of others' through their online interactions with them.

Researchers have adopted Walther's（1992）SIP model in their studies of emoticons and suggest that emoticons can have the same effect as actual non-verbal communication in FTFC interaction（Derks, Bos, ＆ von Grumbkow, 2007, Utz, 2000）.

In addition to such studies users can use these signs to project a self-image or to depict themselves in a favorable light as stated within Walther's Hyperpersonal model（1996）. Although Walther bases his theory of relational communication through text based communication accumulated over time I would suggest that emoticons can have the same effect within a shorter time frame.

Katsuno and Yano（2007）suggest that *kaomoji* enacts a kind of intimacy that relies in part on their visual play. The reading of online text is also made to be more gratifying and visually pleasing through extra-linguistic signs. Those who use emoticons, for example, have been seen as being friendlier, more interesting and creative（Hauffaker ＆ Calvert, 2005; Harris ＆ Paradice, 2007; Carey, 1980）. Fullwood et

al（2013）found that cheeky graphic emoticons were used as signals of flirtation or suggestion in nature and interestingly discovered that age had little influence on the usage and type of emoticon used.

Huang et al（2008）examined graphic based emoticon perception by students enrolled in a business course within the IM（Instant messaging）environment. They were given questionnaires that focused on their use of emoticons, information richness, personal interaction and level of enjoyment. Their findings showed that emoticons were an invaluable tool as a communication method and emoticon users felt that it led to a positive feeling of enjoyment within the personal interaction and supplemented information richness.

Garrison et al（2011）suggest that the emoticon should be looked at as a meaningful linguistic unit. In their study of instant messaging text based emoticon usage they found that emoticons appearing alone rather than next to typed text appeared to perform more rhetorical work as an utterance than the text alone. They suggest that "if researchers begin to recognize emoticons as important semiotic units within a discourse structure, researchers will approach emoticons not as compensatory to language but as contributory to the conversation itself"（p.123）.

In a study of Japanese housewives use of text based emoticons in a chat room Katsuno & Yano（2007）suggests that through *kaomoji* these women could express shades of emotion more satisfactorily than through linguistic means, and in some instances better with *kaomoji* than with words. This would relate to Garrison et al（2011）'s finding that the emoticon should be looked upon as a useful linguistic unit that acts on its own. Katsuno & Yano（2007）conclude that the sense of play and creativity that *kaomoji* produces keeps readers interested and entertained.

The initial wave of literature regarding emoticons suggested that they were used to compensate for the lack of non-verbal cues found in face-to-face interaction or how they represent the feeling of the author. Recent studies however, have looked at how these signs do not merely act as purveyors of writer emotion but also help to index pragmatic intention, speech acts and politeness strategies. Kavanagh（2010）found that that emoticons can be used to index politeness strategies such as conveying that the reader is admirable and showing and interest in them or their family as illustrated in the examples below.

１．Harpers outfit is soooo cute. Glad to hear she is doing well.：）
２．ホントになんでも作っちゃうのがスゴイ‼、(○ ´ｗ`)ノ .｡ﾟ
　　　Honto ni nandemo tsukuccya no ga sugoi
　　　（You can pretty much cook anything, fantastic‼）

Unlike the western emoticon Japanese emoticons or *kaomoji* are also heavily related to Japanese culture with many of them aiming to mimic real life facial or bodily actions. As well as cultural aspects technological factors such as ２ byte keyboard technology allow for these wider and more creative emoticon variations.

The bowing action of some emoticons with the visual representation of the hands by the face as if bowing on the floor is often used to index requests as in the example below.

３．ジャガイモの簡単レシピイタリア風…なにかありましたらおしえて ください m（_ _）m

 Jyagaimo no kantan reshipi itarian fu・・・nanika arimashitara oshiete kudasai m（_ _）m

 "If you know anything about simple Italian style potato recipes, please let me know m（_ _）m."

Kavanagh（2012）writes that the *kaomoji* used in the above example indicates a method to soften the illocutionary force of the written message and does not necessarily contribute to the propositional content of the language used nor indicate emotion, but acts as an aid in the meaning of the linguistic utterance and how the writer wishes to convey it. *kaomoji* with sweat on the side of the face is often used to hedge an awkward statement and is found frequently within Japanese online text. Kavanagh（2010）gives the example below of how *kaomoji* may be used as a device to show modesty or embarrassment.

４．いつか、こんな彼女ができるのかなぁ〜。^_^;

 Itsuka , kona kanojo ga dekiru kanaa

 （Hope I can get that kind of girlfriend someday.）

All of the studies above in both the English and Japanese literature suggest that extra-linguistic signs can be used positively to enrich text based online interactions. They can also give the writer a self-selected online identity of how they wished to be perceived by their readers, for example as in someone who is funny, interesting and has a desire to be well thought of. The readers themselves can also formulate opinions and impressions of the writers through the extra-linguistic signs deployed by the writer, which may even lead to overinflated positive impressions of their interlocutor as implied by Walther's Hyper-personal model（1996）. Goffman's ideas, although writing in 1959, can be applicable to how Walther's （1996）hyperpersonal model works. Goffman（1959）suggests that people attempt to influence the impression that the other person will have of them by altering their own 'setting', 'appearance' and 'manner'. This altering, it can be argued, can be done through extra-linguistic signs.

Conclusion

This paper has attempted to review the relatively new academic discipline of CMC, introducing the roots and foundations of the field. The contrast that face-face communication has with online communication was discussed along with how CMC theories have addressed these differences by examining how the absence of non-verbal and visual cues can have an influence on online relational communication. A review of the technology and the types of extra-linguistic signs available to American and Japanese users was

followed by an examination of how these online writers use these signs to create interpersonal online communication. The paper argues that, similar to the 'cues filtered in' CMC theoretical approach, that even with the absence of the visual and auditory cues, that are available in FTFC, users can use the current technology and available extra-linguistic signs to create harmonious and intimate online discourse. Extra-linguistic signs will continue to dominate the CMC landscape and there are still many questions remaining with how they are used in differing CMC platforms, also by whom, including factors such as age, gender and demographics. Is extra-linguistic sign usage determined by to whom the message is being relayed? and does communicating anonymously online to complete strangers' lead to more or less extra-linguistic sign usage? are just some of the questions that have not been fully addressed. With now so many CMC users communicating online this new form of communication along with its linguistic and extra-linguistic unconventionalities will prove to be a source of interesting data for linguists for many years to come.

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