LOL! (laughing online):
An investigation of non-verbal communication in computer mediated exchanges

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Computer mediated communication (CMC) has a growing presence in modern communication. This paper discusses linguistic research in the field of CMC and explores how non-verbal communication, particularly instant messaging and texting, manifests in CMC. CMC has been found to be more conservative than speech but less conservative than written language. Emoticons and onomatopoeic expressions in CMC seem to play a role similar to non-verbal communication in face-to-face conversation; however, more research is necessary to confirm this.

Keywords: computer mediated communication, instant messaging, texting, non-verbal communication, emoticons

1   Introduction *(signing in)*

With the advent of personal computers and affordable internet connections, more and more people have begun to utilize computer mediated communication (CMC). These methods range from videoconferencing to forum boards to email, but this paper will focus on texting and instant messaging (IM). "Many teachers believe that students' wide use of "text speak" [is] a key factor in their students' negative performance" (Ross, 2007), claiming that this form of communication has negatively impacted the way students write. This paper will not focus on the concern that CMC is destroying the English language, but instead upon the potential problems of non-verbal expression in CMC. How can a speaker convey the depth of emotion present in non-verbal cues, such as facial expression and tone of voice, in a purely textual medium?

As a necessary precursor to further discussion, some important terms used in this paper must be defined. CMC shall be considered any method of communication between two or more sentient individuals occurring via interaction with a computational device (computer or cell phone) across a physical separation between interlocutors. For the most part, the form of CMC of

greatest interest will be IM, which constitutes a communication event that is text-based and synchronous, and which occurs between, typically, two participants, driven by a messaging client such as AIM, MSN Messenger, or Facebook Chat. Another important form of CMC is texting, which includes all textual messages sent via handheld devices to other handheld devices without any additional instant messaging client. Non-verbal communication shall be taken to encompass paralinguistic cues such as vocal tone and non-lexical sounds, proxemics, haptics, posture, eye contact, gestures, and facial expressions. In the context of CMC, traditional non-verbal communication is limited as a result of the spatial displacement of the participants; as such, for the purposes of this paper, the most relevant non-verbal communicators will be paralinguistic cues defined as onomatopoeic items and textual variation such as capital letters indicative of loudness, facial expression translated into emoticons or icons representing common facial expression, and gestures, also shown by emoticons.

2   Research and background (*finding contacts*)

Early forms of synchronous CMC arose in the 1960s (Huang, Yen & Zhang, 2008) but did not become widespread until 1993 in Europe with texting (Ling & Baron, 2007), and 1996 with the advent of ICQ in North America (Huang et al., 2008). Given the relative newness of CMC, it is not surprising that there is a fairly small pool of research. Not only is the available research fairly limited, it is also fairly diffuse. Researchers interested in the topic range from computer scientists to psychologists and sociologists, with a few linguists to round out the field. CMC research has begun to deal with a variety of common myths, including the idea that IM is primarily composed of abbreviations and that it is encouraging poor English. Less research has been done towards understanding how non-verbal communication translates into CMC. This paper will explore some of this research as well as the impact of the interaction between CMC and non-verbal communication.

Linguistic myths abound in many communicative domains; CMC is no exception. Some have even gone so far as to call CMC "the linguistic ruin of [the] generation" (Axtman, 2002, p. 1). Researchers have made numerous findings that discredit this notion. For example, Baron (2004) found that only 1.5% of words (in a large sampling of IM conversations) are replaced by stereotypical IM abbreviations (e.g. *l8r* 'later'), initialisms (e.g. *jk* 'just kidding'), and emoticons (e.g. ☺). Tagliamonte & Denis (2008) found a slightly higher rate of characteristic forms at 2.44%, but this was still a far lower percentage than expected. Given the popular conception that CMC is little more than acronyms and emoticons such as l8r <later>, kk <okay>, ttyl <talk to you later>, lol <laugh out loud>, brb <be right back>, and ☺, these findings are extremely significant.

If only 1.5-2.44% of words are being reduced to stylized IM speech, there remains a significant quantity of words used in more conservative, traditional linguistic expression. The reduction of *you* to *u* has also been observed to occur far less often than assumed by the general populace, with 91.4% of all instances of *you* retaining the full spelling and only 8.6% reducing to *u* (Tagliamonte & Denis, 2008). Ling & Baron (2007) also found similarly low percentages of shortenings and emoticon use in texting corpora. These results strongly suggest a need to reconsider the notion that CMC is reduced and "riddled with hieroglyphics, many of which [readers] simply could not translate"(BBC, 2003). It is, however, also important to note the sample size of the corpora used to draw these conclusions. Though comprised of many thousands of words, Tagliamonte & Denis's (2008) corpus (one of the largest used in this area of research) was comprised of the conversations of only seventy-one secondary school students. Until larger corpora are created, it is potentially deceptive to make generalizations. Seventy-one students are hardly representative of the entire community of IM users, particularly given that the secondary school students in question had volunteered to work with a mentorship program based out of the University of Toronto. These students are likely representative of a certain type of individual with interest in post-secondary education and academic research, and who may place greater emphasis on academic values than would other youth.

A number of researchers have also used their corpora to find similarities and differences between speech and CMC as well as between written language and CMC. In the same 2008 work, Tagliamonte & Denis concluded that, though not nearly as conservative as standard written communication, IM remains noticeably more conservative than speech in a variety of areas. That speakers choose to intensify only 12% of eligible adjectives in IM but 24% in speech suggests that IM tends towards a more conservative written-language style (lacking intensifiers such as *very* and *so*). However, given that there is a strong preference for more modern intensifiers (e.g. *really* and *so*) in IM, it must still be a more progressive speech-like form than standard written English (Tagliamonte & Denis, 2008). Similarly, Tagliamonte & Denis (2008) found language used in IM to be more conservative than speech but also more progressive than written English in the domains of quotative verbs (e.g. *be like* versus *says*), future references (e.g. *gonna* versus *will*), and deontic modals (e.g. *must, have to*). In all of these cases, IM seems to exist somewhere between the cutting edge of spoken communication and the fairly static standard written medium. CMC, despite being more conservative than traditional spoken communication, also seems to take a fairly pragmatic approach compared to many written standards. Texting and IM both tend towards using contracted forms, contracting 84.7% and 68.1% of potentials respectively (Ling & Baron, 2007), which mirrors a more speech-like or informal style. Texting also tends to omit apostrophes in contractions (likely due to complicated input methods), using only a third of required apostrophes (Ling &

Baron, 2007). Punctuation is also commonly dropped in both texting and IM with the sole exception of question marks, which appear following 73% of questions in texts and 100% of questions in IM (Ling & Baron, 2007). This sort of behaviour seems to support an efficiency and necessity approach to punctuation and may change as input technology improves. Unless there is the possibility of ambiguity without the punctuation – for example, a question being taken as a statement and thus not being answered – it is simply ignored for speed and ease of input.

Not only is CMC stylistically unique, it is also significantly removed from other communication mediums by physical manner restrictions. Where face-to-face conversation allows for a full range of non-verbal communication, phone conversations remove physical cues but still allow for paralinguistic cues, and signing conversations remove auditory/tonal cues but allow proxemic and visual cues. On the other end of the spectrum, letter writing lacks auditory and visual cues but tends to use far more advanced literary and rhetorical cues to evoke emotion. This occurs as a consequence of greater time to consider and revise utterances before sending. IM is like none of these. It lacks auditory and visual cues; and, being synchronous, requires relatively rapid responses, leaving less time for consideration and rephrasing. This is where onomatopoeic utterances and emoticons come in. Just as facial expressions and laughter punctuate face-to-face, phone, and sign language conversations at sentence and phrase breaks, utterances such as *haha* and *lol* appear in IM almost exclusively at these junctures, forming a similar sort of punctuation (Provine, Spencer & Mandell, 2007). This suggests that despite the significant differences in mode of expression, emotional cues are still present in IM. The implication is that emoticons and facial expressions may indeed be analogous forms, just as the textual onomatopoeias may be serving faithfully as soundless representations of paralinguistic cues. Nevertheless, a difference of intention does remain as IM emotional cues tend to be much more consciously expressed since they must be actively entered into a device, as opposed to face-to-face cues (Derks, Bos & Grumbkow, 2008). This allows for a more purposeful application of emotional quality than does an unconscious grin in face-to-face conversation. This, however, does not break the analogy suggested by the parallel patterning, allowing emoticons and onomatopoeia to be considered CMC analogues of non-verbal cues present in other types of speech. The presence of these iconic representations differentiates CMC from other written language forms, as most other forms use purely linguistic means to convey emotion without iconic emotional representation.

Given that emoticons and onomatopoeia seem to function as emotional cues in a purely textual environment, and given that emotional cues tend to be fairly common in face-to-face communication, it is striking that both Tagliamonte & Denis (2008) and Ling & Baron (2007) report such low percentages of emoticon

and onomatopoeia use in IM. This may be a result of the nature of the corpora or the possibility that volunteers chose not to submit more emotionally charged conversations. This again highlights the need for larger and more diversely constituted corpora of CMC to be developed in order to capture data that is representative of all manner of natural CMC, spanning age and conversation functions. Ethical issues may stand in the way of easy collection, but until a more substantial corpus is collected it will remain difficult to properly generalize trends, including those surrounding emotional expression.

Regardless of emoticons in IM, emoticon use has been found to correlate positively with enjoyment and degree of personal interaction perceived by users (Huang et al., 2008). It seems that, when "speakers" use emoticons, they feel more connected and also (perhaps as a result) experience greater enjoyment in the interaction. This may support the idea of emoticons as being analogous to facial expressions as, when people smile and behave expressively, they also tend to report greater enjoyment in interaction (Huang et al., 2008). On the other hand, people who are generally enjoying an interaction may use more positive emoticons, just as people who are enjoying a conversation tend to smile more. As such, it is hard to tease out the cause and effect relationship.

Derks, Fischer & Bos (2008) take a slightly different approach to investigating reasons for emoticon use by proposing, instead, that speakers use emoticons to clarify and intensify messages just as they use non-verbal cues in face-to-face contexts. In this view, emoticons play a pivotal role in communicative clarity and depth. Enjoyment is not primary in this theory. They also claim (in opposition to the findings of Tagliamonte & Denis, 2008) that "emoticons are used very often, especially in synchronous chat devices such as MSN" (Derks, Fischer & Bos, 2008). Though emoticons cannot elicit mimicry (Derks, Fischer & Bos, 2008), they do apparently fulfil the need for emotional contact, allowing CMC participants to develop intimacy and emotional connection to an equal or perhaps even greater degree than face-to-face speakers and listeners (Walther, 1995). In light of this research, it seems reasonable to suggest that emoticon use in IM may, in fact, be analogous to non-verbal communication in face-to-face contexts.

Beyond speakers' motives for using an emoticon or non-verbal display, it is important to consider the listeners' interpretation of the stimulus. Using artificial email messages (either positively or negatively inclined) with smiling, frowning, winking or no emoticons, Walther and D'Addario (2001) found emoticons unable to change the positivity or negativity of a message in the eyes of a reader. This does not support the idea of emoticons as equivalent to facial expression. These results may, however, be skewed by the strong valences of the statements which may have made them too absolute to be effected by the addition of a single non-verbal cue. Later work by Derks, Bos & Grumbkow (2008), with an added neutral condition and somewhat less absolute statements in both the positive and

negative conditions, found that emoticons were able to increase ambiguity and sarcasm when they contradicted the valence of the message. Smile emoticons also increased the positivity of a message that they were paired with, while negative emoticons increased negativity for positive and neutral conditions but not for negative conditions. This complicated interplay of emoticons and interpretation suggests that, like a physical expression of emotion, emoticons can help mediate message interpretation.

Both Derks, Bos & Grumbkow (2008) and Walther & D'Addario (2001) used artificial messages set in the context of an email (and not an IM). Though offering valuable insights, these research contexts somewhat reduce the generalizability of the results. Artificial messages are contrived, and as such may not accurately represent the cases wherein an actual speaker would apply emoticons to manipulate interpretation. The use of an email carrier also impacts the interpretations, as email is an asynchronous medium which allows for longer consideration and is less analogous to face-to-face conversation than is synchronous IM. Ideally, to fully investigate the non-verbal cues inherent in emoticons one must observe and test them in natural, synchronous conversational settings.

Though research has been done on a number of aspects of emoticon use and CMC, it remains incomplete and unable to fully explain the communicative application and impact of emoticons and onomatopoeia. The field remains open for future research.

3   Conclusion *(hitting 'send')*

CMC is becoming ever more prevalent in contemporary communication, and this increasing prevalence seems to be leading to decreased stigmatisation of the medium. Nonetheless, there are still those who believe that CMC, such as texting and IM, is an inadequate and even harmful method of communication. CMC is an area of interest that is, as of yet, fairly under-researched. It leaves plenty of room for new discoveries and insights and, as such, is incredibly inviting for young linguists. More and more people are building and maintaining relationships via CMC; subsequently, it is important to understand the differences between traditional letter writing, face-to-face communication, and CMC. How exactly we communicate emotion in a synchronous yet displaced and purely textual environment is a worthy field of study. Every time we gain new insight into the function of CMC we validate its use and prevent prescriptivist tendencies from hiding and even condemning the exciting new developments of the English language as it is used in a new medium of expression.

References *(contact list)*

Axtman, K. (2002). R u online?: The evolving lexicon of wired teens. *Christian Science Monitor*, 12 Dec., 2002, 1.

Baron, N.S. (2004). See you online: Gender issues in college student use of instant messaging. *Journal of Language and Social Psychology* 23, 397–423.

Derks, D., Bos, A.E.R. & Grumbkow, J.V. (2008). Emoticons and online message interpretation. *Social Science Computer Review* 26(3), 379–388.

Derks, D., Fischer, A.H. & Bos, A.E.R. (2008). The role of emotion in computer-mediated communication: A review. *Computers in Human Behaviour* 24, 766–785.

Huang, A.H., Yen, D.C. & Zhang, X. (2008). Exploring the potential effects of emoticons. *Information and Management* 45, 466–473.

Is txt mightier than the word? *BBC News,* 4 Mar., 2003. Retrieved from http://news.bbc.co.uk.

Ling, R. & Baron, N.S., (2007). Text messaging and IM: Linguistic comparison of American college data. *Journal of Language and Social Psychology* 26(3), 291–298.

Provine, R.R. (1993). Laughter punctuates speech: Linguistic, social and gender contexts of laughter. *Ethology* 95, 291–298.

Provine, R.R., Spencer, R.J. & Mandell, D.L. (2007). Emotional expression online: Emoticons punctuate website text messages. *Journal of Language and Social Psychology* 26(3), 299–307.

Ross, K. (2007). Teachers say text messages r ruining kids' riting skills. *American Teacher.* [Online resource, retrieved 14 Jun., 2010 from: http://findarticles.com/p/articles/mi_qa5369/is_200711/ai_n21298339/].

Tagliamonte, S.A. & Denis, D. (2008). Linguistic ruin? Lol!: Instant messaging and teen language. *American Speech* 83(1), 4–34.

Walther, J.B. (1995). Relational aspects of computer-mediated communication: Experimental observations over time. *Organizational Science* 6, 186–203.

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.