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# Coding emotion in computer-mediated communication: the example of YouTube comments

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## 1. Introduction

How can discourse analysis account for the expression of emotion in discourse? What is its place in interaction? To answer those questions, one has to understand first what speakers do in verbal interaction. This is what American linguist John W. DuBois tried to do in a 2007 article, 'Stancetaking in Discourse: Subjectivity, evaluation, interaction'. The article opens with the following words: "one of the most important things we do with words is take a stance. Stance has the power to assign value to objects of interest, to position social actors with respect to those objects, to calibrate alignment between stancetakers, and to invoke presupposed systems of sociocultural value" (DuBois, 2007: 139). This is all the more true in YouTube comments, i.e. comments posted by users in a special section that appears below videos posted on the website. The discourse of YouTube comments has been widely criticized for its supposedly poor quality (Sindoni, 2014: 184 gives examples of the "sweeping criticisms" that "have been unleashed on this specific kind of web-based textuality"). However, it is a fascinating corpus from the point of view of discourse analysis, particularly in the perspective of DuBois's approach of interaction. Indeed, comments are posted by users in order to react to a video, which quintessentially means taking a stance with regards to the video in question. How does that imply expressing one's emotions? According to DuBois, one of the three main stances speakers may take in interaction (alongside 'evaluation' and 'alignment') is 'positioning'. It includes two sides: an epistemic stance (positioning oneself in terms of knowledge and competence) and an affective stance. The latter means for speakers to "position themselves affectively", that is to "choose a position along an affective scale" (DuBois, 2007: 143). A speaker's utterance may then express an 'affective stance' which "indexes specific aspects of the subject's feelings, positioning the speaker subjectively along some scale of affective value" (DuBois, 2007: 144). In the case of YouTube comments, the subject is the commenter, and the object of the stance is the commented object (the video, some part of the video, the author of the video). Therefore, taking an affective stance means positioning oneself on an affective scale with regards to the commented object.

The expression of emotion, in this perspective, may be seen as having a pragmatic or argumentative function more than a merely descriptive function. For example, when commenters express enthusiasm or happiness, they do it not simply to describe what they feel but to take a stance with respect to the video, which is argumentative, not descriptive. Keeping that in mind, the next question discourse analysis faces is then: how do commenters take an affective stance? What modalities do they use? Those questions are the ones this article intends to explore using the tools of discourse analysis and linguistics applied to CMC (computer-mediated communication) analysis.

## 2. Data and methodology

YouTube comments form a peculiar type of discourse. First of all, they belong to CMC, which can be defined as human communication via electronic devices. In early CMC studies, it was sometimes believed that CMC had a language of its own, sometimes called "Internet language" or 'Netspeak' (see Bieswanger, 2013: 465 for a detailed account). More recent studies (for example Herring, 2007 and 2012, Bieswanger and Intermann, 2011) have acknowledged, on the contrary, that there is no such thing as a language specific to CMC or even specific to a single mode of CMC. In short, it relies on the same verbal modalities as discourse produced in non-CMC environments. However, CMC is essentially text-based, and this is generally said to result in a "paucity of paralinguistic and non-linguistic cues" (Bieswanger, 2013: 468). This specificity, in turn, is considered to be the main reason for the development of some micro-linguistic features of CMC such as emoticons and emoji. We may, then, wonder how speaker's emotions are expressed in such a specific context: are verbal and paraverbal modalities as limited as they are said to be in CMC? Do users resort extensively to those micro-linguistic features in order to express emotions?

Of course, answers to those questions could be different according to the CMC mode studied since user's productions ultimately depend on affordances (the set of tools the user is offered by the CMC mode, its interface and functionalities). This paper will rely on a quantitative and qualitative study of comments posted in the comment section of a YouTube video called 'Watch me cry on Valentines day'. The video was posted on February 15, 2018 on the YouTube channel Colleen Vlog, one of the YouTube channels of YouTube star Colleen Ballinger. In this video, Colleen tells the viewers what she thinks about when she has to cry on cue. She shares painful experiences of being bullied and moves on to talking about her love life. This is what is called an 'emotional' video, which is expected to make commenters want to share their feelings. It thus seemed like a good choice for a study about the expression of emotion. Comments were collected over 14 hours from the first comment onwards. The sample collected is at the same time wide and varied, but not too wide to be analyzed precisely. Indeed, in this lapse of time, the video had already been seen a little more than 88 400 times, and 1737 comments had already been written. All comments that include words were posted in English and remarks below will be about English-speaking CMC.

### 3. Verbal modalities used in YouTube comments

As has been said previously, there is no such thing as a language specific to CMC. It is a text-based language that shares the same verbal modalities as any written text. What are, then, the verbal modalities used by commenters to express emotion in the data? First of all, what is meant here by verbal modalities is what is conveyed, directly or indirectly (by way of implicature, as Gricean pragmatics calls it) thanks to words themselves. DuBois gives three examples of utterances expressing an affective stance, but all three rely on the same verbal modality that he calls an 'affective predicate' (DuBois, 2007: 143). The three examples are "I am amazed", "I am glad", and "I am so glad". In those utterances, the first person singular indexes the speaker and the predicate indexes what they feel thanks to a predicative adjective. DuBois's examples consist in rather prototypical expressions of emotion since they rely on predicative adjectives that typically describe emotions (surprise and happiness). Those adjectives belong to what John B. Haviland calls 'emotively charged lexical items' (Haviland, 1989: 28). Therefore, they constitute explicit expressions of the speaker's emotive state.

The dataset contains plenty of examples of those prototypical affective predicates. For instance, 42 comments display affective predicates using the adjective 'happy' attributed to a first person singular ("I'm happy", "im so fucking happy"...), and two use the same pattern with 'glad'. The first person may sometimes not appear ("So happy this is happening!") but the first-person subject is easy to recover (if the subject didn't coincide with the speaker, it would have to be mentioned). What is more, this is an expected feature in a CMC corpus since subject deletion is common in CMC discourse (Werry, 1996: 54).

Commenters use all kinds of emotively-charged lexical items, not only adjectives describing an emotional state. The data contains many examples of verbs of emotion too, even though the limits of this category of stative verbs are not that clear (after all, Quirk et al. put them in the same category as verbs describing attitude, Quirk et al, 1985: 203). The most obvious is that of 'like' and 'love', which are, as is expected, very often used by commenters to position themselves affectively. For example, statements of the form I (or implicit first person) + love + complement are found in 214 comments.

However, as John B. Haviland points out, speakers don't need to 'have recourse to explicit affective predicates' (Haviland, 1989: 29-30). For example, in the data, multiple instances of the statement 'I cried' are to be found in varied forms ("I started crying too", "Ur gonna make me cry Colleen!"...), as well as using synonyms of 'cry' such as 'sob'. Those statements do not describe an emotion *per se* but the conventional physical manifestation of an emotion (which may be sadness or joy, for example, in the case of crying). In this case, the emotive state of the user will be drawn by inference from the physical manifestation the commenter claims to be experiencing or to have experienced. Some commenters mention that they are smiling ("IM SMILING SO MUCH RIGHT

NOW”) or laughing (“Im literally laughing and crying”), which, to a different degree, may be interpreted as an expression of joy. Some say that they are screaming (“OH MY GOD I AM SCREAMING”), which, in this example is an indirect expression of excitement. Some users say that they are about to verbally explode (“IM GONNA LASH OUT”), which is a clear enough expression of anger. Others claim that they want to hug Colleen (“I just wanted to hug you!”) to indirectly express the affection they feel, while some others describe physical symptoms of excitement or nervousness (“IM THROBBIN’, ‘IM ACTUALLY SHAKING”). In all cases, the emotion experienced by the commenter may be inferred from what they describe (and the context) even though it is not a direct expression of emotion.

Haviland mentions another interesting indirect (in that it is reported) expression of emotion brought out by Stephen Levinson:

“if A says B is *whining*, then B is half-crying (or evincing related emotions) and A has negative affect (disapproval) of this event. That is, the term is both descriptive of someone's inner state ... and expressive of the speaker's affectual attitude to that event.” (Levinson, 1981, quoted by Haviland, 1989: 33)

In a similar fashion, what commenters say about the video or about Colleen may sometimes imply what they feel. To that effect, a second-person utterance may also indirectly describe the “affectual attitude” of the speaker. For instance, the commenters writing “you are so awesome” and “Your such an inspiration” indirectly express their admiration or respect.

Last but not least, another indirect verbal modality is that of rhetorical devices such as metaphor and hyperbole. One such expression is commonly found on social media: “I died”, “I am dead” or “I’m dying”, which is, of course, not to be taken literally. It is used ten times in the dataset, again in different forms (for instance “IM FUCKING DEAD”, “I died when she added the smirks at the end”, “Omg I’m dying”). In a hyperbolic way, it always expresses a very strong, overwhelming emotion, which may be surprise, happiness or disappointment, among other possibilities.

Verbal modalities, after all, are not that limited in CMC. This, too, is the conclusion Provine et al. came to in their study of emoticons in website text messages: “the presumed impoverishment of the printed word that led to emoticon use may be overstated in the technologically-oriented communication literature” (Provine et al., 2007: 305). In CMC, speakers have recourse to multiple verbal modalities to convey their emotions. The ones studied above are not limitative (one may think, for example, about terms of address as expressing affection, such as ‘dear’ or ‘bitch’, even though they are quite rare in the dataset). However, most of the time, verbal modalities are not used on their own: they are completed by paraverbal and/or non-verbal modalities. In fact, in the data, only 303 comments (a little more than 17% of all comments) contain verbal modalities alone.

#### **4. Paraverbal modalities in a textual mode of interaction**

Generally speaking, paraverbal modalities are to be understood as modalities not conveyed by words but still attached to verbal language, such as prosody, stress or punctuation.

Of course, the first two, stress and prosody, are not relevant in a textual mode of CMC such as YouTube comments. This doesn’t mean, however, that their functions (for example expressing contrast or emphasis) are not emulated by other means in CMC. As Susan Herring writes, “in text-based CMC phonology is largely irrelevant; typography and orthography take over the functions of sound.” (Herring: 2012) One very frequent means of emulating the paraverbal modalities of spoken language is nonstandard capitalization. In CMC, using all-caps is a conventional way for speakers to express that they are shouting. Therefore, nonstandard capitalization is commonly used to express emphasis, which seems to have been used since the early days of CMC. Christopher Werry had already reached a similar conclusion in his 1996 study of communication on Internet Relay Chat: “capitalization is almost never used for proper nouns or at the start of sentences. Instead, it is

employed as a convention for expressing emphasis” (Werry, 1996: 57). In the dataset, 326 comments include non-standard capitalization.

All-caps may then sometimes be used to express a particular emotion, such as anger or excitement, which would have been conveyed by shouting:

“CAN’T WAIT TO BUY IT!!!!!!”

Sometimes, only a word or a phrase will be capitalized:

“Erikleen is REAL!!!!”

Capitalization may be combined with another more traditional means of emphasis, which is the use of bold characters (used in only 9 comments):

“COLLEEN MAE BALLINGER THE HUG SONG AT THE END IM **CRYING**”

YouTube users also frequently use interjections to express what and how they feel. Interjections are “purely emotive words that do not enter into syntactic relations” (Quirk et al., 1985: 853). As such, they do not enter the lexicon or have a referential function, but “fulfill the conative, phatic or expressive functions of language” (M.E.M. Meinard, 2015: 167). Some even deem them to be ‘non-words’ (Ameka, 1992). Hence, they may be considered as paraverbal modalities rather than simply verbal modalities. They are often used to initiate an utterance, in which case they seem to constitute a spontaneous and unarticulated expression of emotion that precedes verbal expression. They can also be utterance-final, in which case they seem to be used as illocutionary-force markers meant to express how the utterance is to be taken (which is typically what is done in this position by punctuation and emoticons as Dresner and Herring, 2010, have proved). The fact that there is no example of an interjection used in the middle of an utterance in the data tends to prove that they are more paraverbal than verbal (they are always located at the periphery of the utterance).

Here are some examples of interjections used by commenters:

-‘Aww’ is the most-used interjection in the dataset (it is used in 22 comments), and is a rather conventional expression of endearment and compassion:

“Aww Colleen! We love you so much. You such an inspiration ❤️”

-‘Ahhh’ is the second most frequent interjection (used in 20 comments) and may express different emotions (shock, panic, confusion, excitement...)

“AHHHHH THE ENDING IM SHOOOOOOOK”

-‘Ooooh’ may express surprise or disbelief, among other emotions:

“OOOOH coollleeeen!!!!”

-‘Yay’ generally expresses elation or pleasure:

“Yay!!”

-‘Squeeee’ and ‘eeeeeeekkkkk’ are uncommon interjections imitating shrill sounds probably aimed at expressing excitement:

“Squeeee!!!! I love you Colleen! I went to the San Diego show and I’m still freaking out over it.”

“Yessss I’m living for that Stockleen giggle compilation 😊 eeeeeekkkkkk omg and the outro too”

Interestingly enough, some phrases fulfil the same function as interjections. This is the case of 'holy shit' or 'oh my god', that are often used in utterance-initial position with the same function as interjections: expressing the emotive state of the utterer. 'Oh my god', for example, may express surprise, excitement or disbelief.

Acronyms may also be used with the same function. This is frequently the case in the dataset, not surprisingly since abbreviated forms of all sorts are one of the characteristic features of CMC discourse (Bieswanger, 2013: 474-476). The most famous example is LOL, which is originally the acronym of 'laughing out loud' but has come to live a life of its own in language as an interjection. It is even described as such by the Oxford English Dictionary, which takes it to be an "exclamation" (the OED uses 'exclamation' as a synonym of 'interjection') "used to draw attention to a joke or amusing statement, or to express amusement". LOL is used in 21 comments in the dataset. Curiously, it is only used twice in initial position, and the rest of the time it appears in final position. Further studies would be needed to determine whether this is to be linked with the function of LOL (expressing amusement or drawing attention to the fact that the statement is a joke). Another frequent acronym used as an interjection is OMG (and its cousin OMFG), which is in fact the acronym for the phrase 'Oh my (fucking) god' that is already used as an interjection. It is used far more frequently than LOL since it appears in 135 comments (most of the time in initial position).

It is to be noted that all those interjections may be used to express more than one emotion. This is why it is sometimes difficult to name precisely the emotion expressed by the commenter. For example, 'omg' in the comment "Omg it was so hard watching you start crying" doesn't seem to express clearly surprise, sadness or disbelief and may be a mix of different emotions. The use of 'ugh' in this other comment, "ugh i love her so much", is also rather surprising since this conventional interjection is typically used to express a strong negative emotion (disgust, disapproval, dislike...) but is associated here with a very positive statement.

Apart from capitalization and interjections, commenters still have other means at hand to emulate paraverbal modalities typically associated with expressing one's emotion and translate the effects of voice, gesture and tone in written comments. A commonly used means is "reduplicated letters [...] used to represent drawn-out expressive intonation" (Werry: 57). A very frequent instance of that process is the reduplication of the vowel of the intensifying adverb 'so', which is used for example in "Sooo happy for you!!!!!!". It is, however, found in many other words: "The ending got me SHOOOOOKKKK", "ERIKLEEEEEEEN IS REEEEEAAAAL", "Omg u made me craaaazy".

Last but not least, in most written modes, inside and outside of CMC, traditional punctuation signs, such as the exclamation mark, are used to express emotion. However, CMC scholars generally agree on the fact that non-standard punctuation, from the absence of punctuation to "multiple and exaggerated use of punctuation" (Bieswanger, 2013: 476), is a characteristic feature of CMC. Repeated punctuation, in this context, is perceived as another means to translate the vivid emotions, such as anger, excitement, amazement or elation, that are conveyed by an utterance: 'Erikleen!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!', 'I love this video sooo much!!!', 'COLLEEN IS AMAZINGGGGGG HOW ARE WE BLESSED WITH SUCH AN ANGEL?????'.

## 5. Non-verbal modalities

A final level of CMC discourse remains to be explored: the level of non-verbal modalities. This is the level where modalities that supposedly don't belong to the verbal code at all, i.e. graphical devices, are to be found. The interface of YouTube comments only enables users to employ two graphical devices, emoticons and emoji, among the six devices (emoticon, emoji, gif, stickers, images and videos) identified in Herring and Dainas, 2017. Both are generally considered as not belonging to the verbal code since they are graphical modalities, hence not part of the lexicon or the paraverbal modalities traditionally attached to verbal language (such as, again, prosody or punctuation).

In fact, since the early days of CMC studies in the 1990s, emoticons have been viewed most of the time as "indicators of affective states, the purpose of which is to convey nonlinguistic

information that in face-to-face communication is conveyed through facial expression and other bodily indicators” (Dresner and Herring, 2010: 250). For instance, inserting a smiling face in an utterance would be a way to make up for the impossibility to physically smile. Their use goes back to the start of CMC history: they “have been used in computer-mediated communication (CMC) since 1979” (Herring and Dainas, 2017). As for emoji, which is from Japanese ‘e’ (picture) and ‘moji’ (letter, character), they were a later addition. International users have been employing them massively since the beginning of the 2010s, when they were made available for use in text messages on phones, social networking and instant messages services. They are often seen as the evolution of emoticons since they “fulfil similar roles” but “are more visually complex and may be expected to function somewhat differently in CMC as a consequence” (Herring and Dainas, 2017). Indeed, emoji no longer use characters and punctuation, as emoticons did (emoticons are formed using ASCII characters) but are “small digital image[s] or icon[s] used to express an idea, emotion” (Oxford English dictionary). Therefore, just like emoticons, they may represent facial expressions, but they can also picture objects, body parts, symbols, or animals, among other things. Both may be used by commenters to express their emotions, even though this is not their only function (for a recap of the different functions of emoticons and emoji, see Herring and Dainas, 2017).

There is a direct link between what emoticons and emoji depict (for example a heart, an angry face, a thumb up) and this affective function. This is what Rezabek and Cochenour already wrote in 1996: “For example, the combination of symbols :-) represents a typical smiley face and conveys the sentiment that the person sending the message and using that particular emoticon is pleased, happy, agreeable, or in a similar state of mind” (Rezabek and Cochenour: 201). After all, this is why the ‘smiley face’ emoticon is also called ‘happy face’: the facial expression depicted is perceived as a synonym for the emotion it is supposed to express. In this case, they function in the same way as some of the verbal modalities studied above: they express emotions in an indirect fashion similar to verbal statements such as ‘I am laughing’ or ‘I am smiling’. The emotive state of the user is also drawn by inference from the physical manifestation the emoticon or emoji depicts. Their considerable advantage over verbal modalities is that they can directly depict a facial expression (smiling, frowning...) or a physical manifestation or action (laughing, crying, drooling, shouting...) in a single form. In turn, they may even stand alone and pack the whole affective stance without using verbal modalities. Here are some examples of affective uses of emoticons and emoji:

-The frowning face emoticon is also called the sad face since it quite unequivocally expresses sadness:

“that was SO hard to watch her cry..... :( ”

-The smiling face, which is also called happy face, indicates happiness, joy, or other positive emotions:

“Awww the ending made me smile so hard 😊😊😊”

-The face with tears of joy is also a frequent expression of cheerfulness or joy, often perceived to be stronger than a smiling face:

“Stocolleen confirmed!!!! 😄”

-The open hands represent a hug and are thus an expression of affection or empathy:

“Yes girl, preach 🤝🤝”

-The raised hands in celebration are yet another way to express joy, particularly in reaction to a good piece of news:

“lol did u just confirm? heh heh heh 😊❤️🎉”



Of course, all emoticons and emoji do not necessarily depict facial expressions or bodily gestures. They may depict animals or objects too, among other things. However, few emoticons and emoji not depicting a facial expression or action are used to express emotions in the data. One of them, however, is very frequently used: the heart. It may be depicted in many different ways as in the following examples:

“Omg I love you!!!❤️”

“the end..😞❤️”

“You are so inspiring! <3 ”

The heart is the graphical equivalent to the verb and noun “love”. It is therefore a conventional expression of fondness, tenderness, or more straightforwardly, love. It is the most frequent graphical modality used in the corpus (14 percent of all comments -245 comments- use at least one of its variants).

Herring 2012 notes that “studies of emoticons in English CMC report that they occur less often than popularly believed”. Maybe this is because, as has been proved throughout this article, commenters have many different means and modalities to choose from to express their emotions. In fact, in the dataset studied in this article, only 413 comments out of 1737 use emoticons or emoji (a little less than 24%). Interestingly enough, in a previous study of a comparable set of data (Schneebeil: 2017), a very similar proportion of a little less than 23% (915 comments out of 4041) was found.

## 6. Conclusion

The expression of emotion in CMC appeals to verbal, paraverbal, and non-verbal modalities at the same time. Contrary to what could have been expected, users do not resort extensively to non-verbal modalities for that purpose. Conversely, verbal modalities are commonly used to express emotion in the data, sometimes alone. In fact, most of the time, paraverbal and non-verbal modalities are clearly not necessary for comments to make sense on their own. In spite of that, commenters often seem to feel the need to use them. The reasons why they do so may be multiple. One of them could be found in the “low degree of neutral stance” (Sindoni, 2014: 203) YouTube comments tend to show. Comments are often either strongly positive or strongly negative, and contain many high-degree markers (Schneebeil, 2015). In this perspective, a possible assumption could be that commenters feel that using verbal modalities alone may not be enough to convey such a strong position. This would explain why so many of them resort to multiple parallel and complementary means.

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