



HAL
open science

GIFs in online interaction: embodied cues and beyond

Célia Schneebeli

► **To cite this version:**

Célia Schneebeli. GIFs in online interaction: embodied cues and beyond. Cahiers de l'ILSL, 2019, La communication digitale, volume 2: se mettre en scène en ligne, 59. halshs-02142774

HAL Id: halshs-02142774

<https://shs.hal.science/halshs-02142774>

Submitted on 28 May 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

GIFs IN ONLINE WRITTEN INTERACTION: EMBODIED CUES AND BEYOND

Celia SCHNEEBELI

University of Burgundy / EA 4182 – Centre Interlangues
celia.schneebeli@u-bourgogne.fr

Abstract

Recent research has characterized GIFs as a means for speakers to reproduce nonlinguistic cues such as bodily actions and facial expressions in online written interaction, which is first and foremost text-based. They make it possible to translate in digital interaction what those nonlinguistic cues enable to do in face-to-face conversation: express emotion and affect, and elaborate on what is being said. This article explores further the role and functions of GIFs as embodied cues and goes beyond, where GIF use diverges from body language in face-to-face conversation.

Keywords : GIF, gesture, CMC, interaction, utterance

Introduction

The GIF, acronym for Graphics Interchange Format, is an image file format that was developed by American online service provider CompuServe, and released in 1987. It uses a technique that enables lossless data compression, which makes it possible to obtain images with a reduced file size without impacting their visual quality. More importantly, contrary to other popular image formats such as the JPEG or PNG, it also enables to show looping sequences “within the same image file without being the size (or resolution) of a video” (Miltner and Highfield 2017: 3). So much so that, in the Web 2.0, the word GIF is commonly used to refer not to the file format itself but to a short looping video composed of a sequence of images taken from a film, a TV series, a cartoon or any television programme. In this paper, the word GIF is likewise taken in this metonymical sense of the word.

In a 2016 article, Jackson Tolins and Patrawat Samermit focus on the proximity of the new affordances provided by GIFs and the role of gesture and facial expression in face-to-face dialogue. According to them, GIFs offer a way for users to express bodily displays in text-based interaction: they constitute

“embodied reenactment” thanks to which users can reproduce their own nonverbal behaviour in computer-mediated conversation (CMC). This is why Tolins and Samermit try to approach the function of GIFs in text-based virtual communication within the same framework as face-to-face dialogue. GIF use is analysed as an expansion and extension of a pre-existing practice that already exists outside of technology-mediated interaction. Since it “both mirror[s] face-to-face dialogue and extend[s] beyond it” (Tolins and Samermit 2016:75), GIF use seems to be a good example of those “phenomena that adapt to and are reconfigured by Web 2.0” (Herring 2013: 16). This perspective, the one of adaptation and reconfiguration, is the one that this article intends to adopt in order to study how GIFs are used in online written interaction. Starting from Tolins and Samermit’s point that GIFs are used as stand-ins for speaker’s nonverbal behaviours in computer-mediated conversation, it aims to go beyond and show that GIFs are used in other ways than what happens in face-to-face conversation. In doing so, the main questions this study tackles are the following: What are the functions of GIFs in online conversation? How do they interact with verbal cues? Where does their use diverge from what body language enables to do in face-to-face conversation? The approach is that of pragmatics, discourse analysis, and more precisely of computer-mediated discourse analysis (CMDA).

To answer those opening questions, the study relies on a qualitative and quantitative analysis of a sample of messages posted on the public Facebook page of an American ice hockey team, the Philadelphia Flyers. The dataset was collected over 3 days in October 2018. It is composed of 5 comment threads, which total 1351 messages, of which 90 use GIFs. While it is difficult, if not impossible, to collect a sample that would be representative of what users do on Facebook (it may indeed vary according to the type of page, its theme or audience), pages devoted to popular sports team have the benefit of having a wide audience and an active fan base, and thus present posts with relatively numerous comments (the selected threads have from 134 to 495 comments each). All the initial messages of the chosen threads deal with different topics and were posted in different contexts. Therefore, the dataset comprises diverse reactions in different contexts, and present multiple uses of GIFs.

Facebook is in itself a relevant choice to perform such a study since it belongs to what Susan C. Herring calls « interactive multimodal platforms

(IMPs) », i.e. « Web 2.0 platforms that support a convergence of channels or ‘modes’ (text, audio, video, images) for user-to-user communication » (Herring 2016 : 398). It lets users insert emoji, videos, stickers, images and GIFs, which is the latest addition (it dates back to 2017) to the modalities that can be used on the platform. This “use of channels other than text, and semiotic systems other than verbal language, to carry on ‘conversational’ exchanges” is considered by Herring as “[a]nother emergent Discourse 2.0 phenomenon” (Herring 2013: 16). However, as she also notes, in spite of those non-verbal modalities having been made available, discourse on Web 2.0 platforms such as Facebook remains essentially text-based. This makes it all the more relevant to question the function of supposedly nonverbal modalities such as GIFs, and the interaction between verbal and nonverbal modalities on those platforms.

1. GIFs and the “performance of affect”

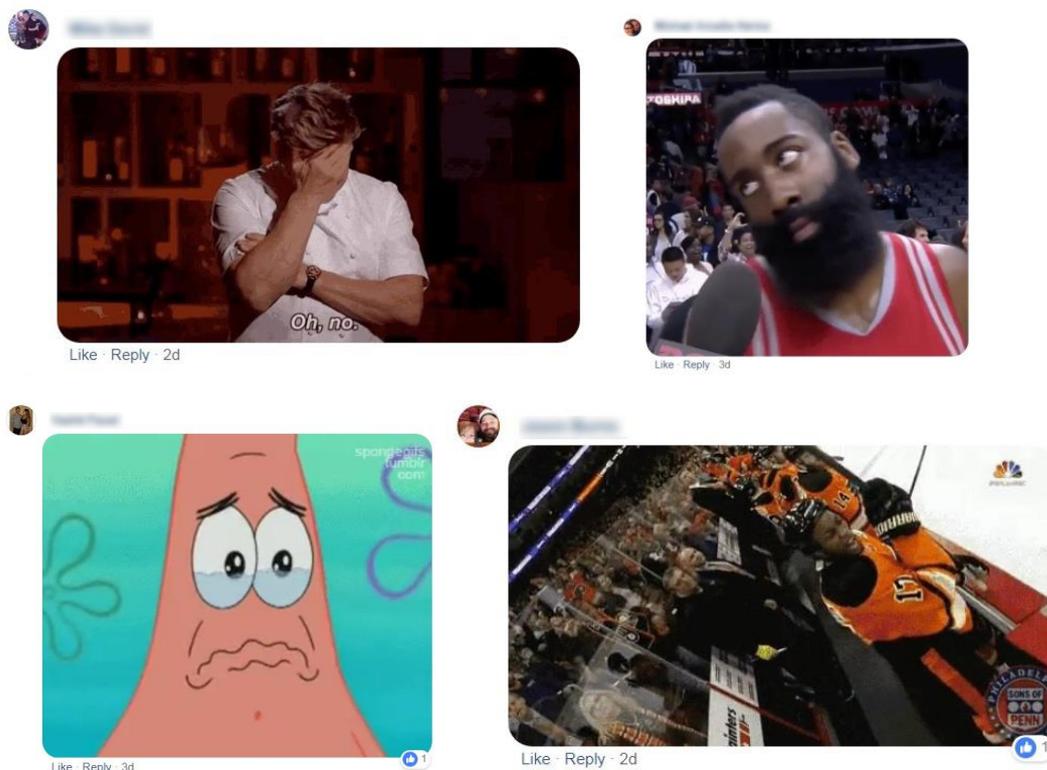
In recent studies, the function of GIFs in computer-mediated discourse has been linked to the expression of emotion and affect, be it called “affective responses” (Tolins and Samermit 2016: 75) or “performance of affect” (Miltner and Highfield 2017: 1). For Miltner and Highfield, this is even “one of the most common uses of GIFs –if not the most common” (2017: 4). This claim lies on the link between the gestures GIFs enable to picture and the function of gesture in communication in general.

1.1. GIFs as stand-ins for gestures in computer-mediated interaction

Modern gesture studies (Kendon 2004, McNeill 1992) has shown that gesture, in face-to-face conversation, may express “substantive meaning” (Kendon 2017: 161). When they are undertaken deliberately, they can be viewed as visual utterances that may express propositional content and pragmatic content. Among other things, utterances may then express feelings and emotions. For example, in certain contexts (and cultures, since gesture-meaning is strongly conventionalized and culture-dependent) shaking one’s head can express disappointment, or a clenched fist may express anger. It is then quite simple to understand why GIFs are used to perform affect: as GIFs enable to picture people or characters performing those gestures, they have become a way to perform those gestures by proxy. In the text-based environment of Facebook,

GIFs enable to reproduce what gestures, bodily actions and facial expressions enable to do in face-to-face conversation. To do so, the user just has to select a GIF showing a person or a character performing the bodily display he or she would have performed in face-to-face conversation, or an elaborated version of it. The use of what could be called “gestural GIF” as affective utterance is quite frequent in the dataset. In 50 GIFs out of the 90 used in the five threads, the gesture or facial expression pictured can be directly linked to the expression of an emotion. Above are some examples:

Figure 1: GIFs showing gesture / bodily movement to express an emotion.



All these GIFs show conventionalized expressions of affect through bodily actions, which are the same in real life and virtual communication: the now famous facepalm expresses dismay, rolling one’s eyes expresses exasperation, eyes full of tears express sadness, and breaking something with an angry face (as the hockey player above who breaks his stick on the boards) expresses rage and frustration. The gesture or facial expression performed in these GIFs is therefore analysed by the co-speaker as a meaningful “visual and affective response toward the contents of the prior turn” (Tolins and Samermit 2016 : 81). Just as gestures in face-to-face interaction, GIFs may then constitute a single turn in a

conversation: no further speech is needed. The GIF itself expresses the affective response. The speaker can also choose to couple gesture and speech. This is the case in 38 messages in the dataset. All of them present cases of GIFs including text inside the image itself. There is no case, on the contrary, of a composite turn where a message including a GIF would be coupled by a speaker with another message containing text only.

1.2. Gestural GIFs and speech

Kendon and other gesture analysts rightly point out that a gesture may constitute an utterance in itself, or may be used in combination with speech: “At times [gestures] are used in conjunction with spoken expressions, at other times as complements, supplements, substitutes or as alternatives to them” (Kendon 2004: 1). Tolins and Samermit similarly divide gestural GIFs between stand-alone GIFs that express an affective response on their own, and GIFs used in composite turns composed of one or more textual messages followed by a GIF that represents or elaborates on the textual content. There are no composite turns in the dataset, but there are many GIFs containing text, a case which is a bit different, and curiously enough, is not analysed by Tolins and Samermit (2016). In this case, the interaction between gesture and speech, and the respective roles of speech and gestures, is rather complex and variable. First of all, the gesture or bodily action may have more informational weight than the caption, which could then be removed. This is the case here for example:

Figure 2: GIF expressing sadness / disappointment through bodily action and caption.



The man that the GIF shows is crying in his couch, which already evokes sadness, i.e. the emotion the poster may be feeling after reading the initial post

that announces that one of the best players of the team has been injured. Why, then, add a caption? It could first be read as a way to add a nuance to what is being expressed. In the case of the man crying, the caption may link sadness to dismay or disappointment. It could also be intended as a way to make the emotion expressed clearer. This is probably the reason why a caption has been added in the following GIF, which reacts to the post announcing the Flyer’s severe loss against the Sharks:

Figure 3: GIF expressing shame though bodily action and disambiguating caption.



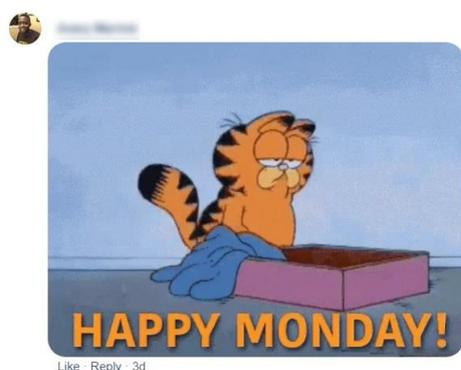
The caption “For shame” makes it clear that the affective reaction expressed by the cat walking with a paper bag on its head is shame. Here, the caption acts as a form of disambiguation. Adding a redundant caption can also be a way to reinforce the emotion expressed, just as in face-to-face conversation, where a speaker may use at the same time a gesture and an utterance that express the same feeling. This is in fact what the man (a WWE wrestler) in the following GIF does:

Figure 4: GIF expressing joy and triumph through redundant gesture-speech combination



This GIF is used to react to the post announcing the long awaited victory of the Flyers. It shows the conventional bodily gestures used to rejoice after victory: raised arms. It also contains a “Yes!” caption that is the utterance conventionally associated to the same emotion, which is also what the man’s lips seem to be saying. Redundancy between bodily gesture and utterance can be read as a way to reinforce the expression of joy. In fact, of all the gestural GIFs accompanied by a caption, 17 are used as subtitles for an utterance the person or character portrayed is already saying. On the contrary, other users include captions that convey a message which is the opposite of what the bodily action pictured in the GIF say. Non-redundancy between speech and bodily action then creates irony:

Figure 5: GIF expressing dismay though non-redundant (ironic) speech-gesture combination.



In the context of the initial message responded to (the one that says one of the star player has been injured), the emotion expressed here is dismay and being jaded. The bodily display, going (back?) to bed with a weary face, corresponds to this affect. The apparently joyful caption is therefore read as ironic and really conveying a negative feeling. In this case, gesture and speech are of equal importance. Both are needed to build the meaning of the utterance. Last but not least, the caption may sometimes be the most important part of the utterance and bodily displays may not be significant in themselves. This is the case in the following post:

Figure 6: GIF expressing dismay predominantly though textual channel.



The exclamation “Oy vey!” expresses dismay or exasperation in Yiddish. The gesture the character makes is not significant or clear enough to be used alone (it could express surprise, for example). The message could have been reduced to the caption as main text, without any image or bodily action.

All these examples show that the relationship between bodily display and caption in GIFs is variable, just as the relationship between gesture and speech is in face-to-face interaction. In terms of content, bodily action and speech may or may not be redundant, with different effects. In terms of informational weight, bodily displays sometimes seem more important than the caption (which could be erased), but sometimes the caption is needed or more important, and sometimes the caption and the image seem of equal weight. This is why the bodily display pictured in GIFs cannot be reduced to an illustration or demonstration of the emotion the text already expresses.

2. GIFs as visual elaboration

It would be an oversimplification to limit the function of GIFs in computer-mediated communication to the “performance of affect”. Similarly, reducing the content of GIFs to gestures, facial expressions or bodily actions would make the scholar overlook some important aspects and functions of GIFs. Tolins and Samermit try to go beyond the expression of affect by examining a second function, which they call “co-speech demonstrations”. In this function, GIFs are coupled with text and are used by speakers to “provide visual elaborations of their own talk” (Tolins and Samermit 2016: 83). However, this function and its limits are less clearly defined by the authors than that of “affective response displays”. It seems to encompass all cases where GIFs are used to extend the

content of one or more previous message(s), be it to express affect or picture action. A clearer classification would be needed. As it has been written above, in the dataset used for this study, there is no case of composite turns where a GIF would accompany a textual message. However, there are two uses in the dataset that appeal to the same function of visual elaboration, and seem to form two distinct types. One is where the GIF is used to merely illustrate or echo the content or part of the content of a preceding message, whether it is a user comment or the initial message posted on the Facebook page. This usage could be called “illustrative GIFs”. The other one is where a GIF is used as a visual metaphor but without an explicit tenor provided in an accompanying message. This second usage we call “metaphorical GIFs”. In both cases, the content of the GIF is not limited to picturing a person and/or bodily actions.

2.1 Illustrative GIFs

The use of illustrative GIFs, i.e. GIFs used to illustrate or echo what is being discussed is not very frequent in the dataset: there are only three of them. In the five selected threads, it mostly consists of people using GIFs showing Gritty, the new mascot of the Philadelphia Flyers, when Gritty is being referred to by a post or other users:

Figure 7: Illustrative GIF showing Gritty dancing.



This GIF, which shows Gritty dancing, is posted as a primary reaction to the initial post that announces that the new mask of the Flyers’ goalie features Gritty. It seems to express no particular emotion, bears no argumentative significance with regards to the preceding message or initial post, but clearly corresponds to the topic at hand. Therefore, it seems to be merely illustrative: it

depicts what is being discussed in the thread. A previous study suggests that this illustrative role tends to be more frequently fulfilled by static images than GIFs (see Schneebeli 2019, for a comparison between GIFs and static images and examples of static images used as illustrations). Most GIFs used as visual elaboration seem to assume a more complex role of visual metaphor, where the GIF does not just illustrate what is being discussed, but presents a visual elaboration in the form of an analogy.

2.2. Metaphorical GIFs

Metaphors consist in describing a thing, person, situation or feeling (the “tenor” of the metaphor) with a word or expression normally denoting another thing, person, situation or feeling (the “vehicle” of the metaphor), so as to suggest some common quality shared by the two. In computer-mediated discourse, GIFs are frequently used to express analogy in a similar way. This is in fact the very essence of all the posts opening with the snowclone sentence “When” + an assertive clause describing a situation of life (“When I have a paper to finish”, “When I decide to quit smoking”, “When I receive a mean review”...) and followed by a GIF which presents a visual elaboration of the situation described in the initial sentence. This type of post, particularly popular on Twitter and Tumblr, relies on an analogy between the situation described in the sentence and the one showed in the GIF, which is made to be striking and/or funny. It should be noted that the GIF in question does not have to picture a facial expression, a gesture, or any action performed by a person. As a metaphor, it does not have to belong to the same referential domain as the tenor, therefore it may virtually picture anything. In the dataset studied, there is no such use of a metaphorical GIF coupled with a textual message in a composite turn. There are, however, metaphorical GIFs used in single turns. The only difference between the two is that the tenor of the metaphor is never provided by the speaker, although it is easily recoverable in the situation or a preceding post by another speaker. For example, three posts use the “dumpster fire” metaphor. To do so, they use the two following GIFs:

Figure 8: Metaphorical GIFs showing a dumpster fire to express how calamitous a situation is.



Like · Reply · 18h



Like · Reply · 17h

These GIFs are found in the comment thread of the post which announces the result of the game where the Flyers lost 8 to 2 against the Sharks of San Jose. They are used to describe how the team plays, or the whole situation of the team which is in the middle of a losing streak. The tenor is provided by the initial post on the page, which announces the Flyer's heavy loss. The dumpster fire metaphor in itself is not only used as a GIF. As a set expression, it has entered the Merriam-Webster dictionary in 2018 with the following definition: "An utterly calamitous or mismanaged situation or occurrence". It is therefore now considered as a set metaphor, which is immediately recognizable, for which the GIF is a visual counterpart. The corresponding GIF enables to pack the metaphor in a single moving image without using words, and even adapt it to the situation at hand since in one of those GIFs, the dumpster in question lies on the ice of an arena. There is no direct equivalent to this in face-to-face conversation.

All metaphorical GIFs do not have to rely on a set metaphor. Any action or situation can be used, as long as the common property between the tenor and the vehicle is clear enough. Another GIF used in the same comment thread shows an archive film footage of a train accident. Again, it elaborates on the situation or performance of the team, with is depicted as a literal catastrophe. A similar image is used to comment on the post which invites users to react to the same disastrous game while it is being broadcast. It shows an electric train which derails and takes fire, leaving its owner speechless. The image is again a visual elaboration of what is happening: while the game had started quietly, it all went quickly wrong for the Flyers. The incapacity of the Flyers to stop the other team from scoring is mocked in another metaphorical GIF, where Homer Simpson receives so many soccer balls that he can't stop them and ends up being buried under a pile of soccer balls.

As can be seen in those examples, metaphorical GIFs often rely on hyperbolic elaborations. Being extracted from films, cartoons, or series, GIFs enable users to give their thoughts a dramatic elaboration, which would not be possible, or at least would be more limited (as far as words and gestures are concerned), in face-to-face conversation. As Miltner and Highfield put it, they have the “capacity to augment and shape our affective performances”, depict “the mundane and the ordinary, conveyed through heightened production values, performances, and emotions (Miltner and Highfield 2017: 4). The visual elaboration provided and reconfigured by GIFs can thus be literally larger than life.

3. Other functions of GIFs

The two concepts that have been explored above, *performance of affect* and *visual elaboration* still do not enable to describe wholly how and why GIFs are used in the dataset. This is in part linked to the fact that only the first category expresses a function in the strict sense of the word, i.e. the purpose for which GIFs are used. Visual elaboration in itself is not a function: it does not say anything about what GIFs are meant to express or do. Therefore, it would more aptly be considered a category of GIF use, which can have diverse functions. One of the main functions in question, the expression of emotions and affect, has already been explored. But other functions appear in the dataset, which need to be accounted for: an evaluative function, a perlocutionary function, and another function that Miltner and Highfield call “demonstration of cultural knowledge” (Miltner and Highfield 2017: 1).

3.1. Evaluative function

In conversation, be it online or off line, people often produce utterances with an evaluative function, i.e. in order to attribute a certain value or quality to an object, person or utterance, which positions it on a corresponding scale of worth. As evaluating deals with giving one’s opinion, it may sometimes imply affect but must not be confused with expressing affect. The affective and evaluative functions are located on two different levels, even though they may sometimes overlap: the expression of opinion may but does not necessarily imply the expression of emotion. As for GIFs that deal directly with the expression of

judgment, they appear to be of two forms. The first is GIFs that explicitly deliver the judgment directly or by proxy:

Figure 9: GIFs delivering an explicit judgment.



These GIFs have a caption that contains a verbal predicate or adjective that bears an evaluative meaning. It enables the user to express his or her opinion on something, which is their main function. In the first example, the injured player referred to in the initial message is accused of being too “soft”. In the other example, the team itself is the object of a very negative evaluation. The evaluative element in the GIF is in those cases the caption more than the visual display. There is no example in the dataset of a GIF that would express evaluation through a bodily movement alone but one could think of a GIF showing someone giving a thumb up or applauding.

The second form of evaluative GIF is where assessment relies on a visual metaphor that gives a positive (flattering) or negative (disparaging) image of the tenor. In fact, most of the metaphorical GIFs quoted above have an evaluative function. The dumpster fire metaphor, which of course always implies a very negative evaluation, is a good example. Another example, used twice in the dataset, is a GIF which shows the Flyers’ mascot falling in a ridiculous manner while skating (something associated with people who can’t skate). By analogy, users will understand that it is used to criticize the team for not knowing how to play hockey properly.

3.2 Perlocutionary function

GIFs can also have a perlocutionary function, in which they are meant to have an effect on the reader or co-speaker. The following example does so:

Figure 10: GIF used in order to issue a directive.



The GIF is used to issue a directive, which has, by definition, a perlocutionary function. This function, however, is essentially due to the caption (an imperative utterance), not to the portrayed action. There is no instance, in the dataset, of a GIF that would deliver an order on its own, just by means of a bodily action. However, it is not impossible to do so. One could think for example of a GIF showing a person motioning someone to go out.

Apart from delivering directives, GIFs may more generally be used to engage or provoke the addressee. In the dataset, some GIFs seem to be used with the sole function of inciting a reaction in the co-utterer or reader. This is the case in the following exchange, which is about the new mascot of the Flyers, Gritty:

Figure 11: GIF used in order to incite a reaction of the co-utterer.



While the first commenter wishes the Flyers would get rid of Gritty, a second user replies to this post with a single GIF showing Gritty dancing. This can be seen as a humorous provocation that aims at making the first commenter react, which he does, humorously too, by answering “thanks...right before lunch too”. Another classic example of a perlocutionary use is when fans of other teams comment on the page of the Philadelphia Flyers with GIFs that are meant to taunt them. There is only one instance of it in the dataset:

Figure 12: GIF used in order to taunt Philadelphia Flyers fans.



The GIF shows the mascot of the historical rival team, the Penguins of Pittsburgh, holding the Stanley cup, which is the trophy awarded to the team that wins the post-season tournament. This GIF was posted by a fan of the Penguins in order to annoy and upset Philadelphia fans, even though the initial post has

nothing to do with it. It goes without saying that this GIF usage is a lot more frequent in case of games opposing the two rivals, or during post-season games, where teams are trying to win the cup.

3.3. Social function

Last but not least, as Miltner and Highfield rightly write, “The selection and presentation of GIFs are also a performance of cultural knowledge. The GIF is not just a proxy for the individual’s particular affective or emotional state, but an illustration of the user’s knowledge of a certain text or cultural conversation” (Miltner and Highfield 2017: 6-7). Thus, this last function, which they call “performance” or “demonstration of cultural knowledge” is more of a meta-function, a social function which may be present in any of the functions detailed above. Indeed, GIFs do not only enable to judge, taunt, express a reaction or emotion; they also enable to present oneself in interaction (to paraphrase Goffman, 1959). In selecting a GIF, users may then make a statement about themselves. In Goffman’s terms, GIFs can be seen as “props” that can be used to give oneself a certain identity in interaction. For example, choosing a GIF from a particular series, film, or cartoon, or portraying a certain actor or character may be a way to position oneself as a fan of the work or person in question. At the same time, it may also create a sense of belonging with other users who are familiar with the same culture or context the GIF comes from. Maybe this function of GIFs could be compared to the phatic function of language: it is not really about the content of the message itself but about bonding, creating complicity with others users who are familiar with the same culture. Of course, this last function must not be idealized: sometimes GIFs are selected for their iconicity (the fact that they perfectly match the intended meaning and effect), not the work they come from or the character or person they picture. Therefore, it must not be taken to be more systematic than it really is.

Conclusion

GIFs enable to translate to digital interaction what bodily displays enable to do in face-to-face conversation: express emotion, provide a visual elaboration of speech, evaluate, provoke or engage the addressee. However, they can’t be considered only as an adaptation of body language in online conversation. First, GIFs have the added value of proposing a complex visual representation that

makes utterances more dramatic, possibly more appealing (when borrowing from a culture shared by addressees), and which enhances affective performances. What is more, GIFs may also include speech in the form of captions. As a result, GIFs can regroup speech and visual representation in a single multimodal form of expression that may be used in a single turn, without typing more text. For this reason, the GIF may be considered as a synthetic form of utterance that is particularly adapted to Web 2.0 discourse, which is increasingly multimodal (Herring 2013: 21). This conclusion would then call for a re-evaluation of the semiotic nature of GIF, which are often taken to be non-verbal modalities.

References

- HERRING, Susan C. (2013). « Discourse in Web 2.0: familiar, reconfigured, emergent ». In TANNEN Deborah & TRESTER Anna-Marie (eds), *Discourse 2.0: language and the new media* (pp. 1-26). Washington D.C : Georgetown University Press.
- HERRING, Susan C. (2016). « New Frontiers in Multimodal Communication ». In GEORGAKOPOULOU, Alexandra & SPILIOTI, Tereza, *The Routledge Handbook of Language and Digital Communication* (pp. 398-402). London: Routledge.
- GOFFMAN, Erving (1959). *The Presentation of Self in Everyday Life*. New York: Anchor Books.
- KENDON, Adam (2004). *Gesture: Visible Action as Utterance*. Cambridge: Cambridge University Press.
- KENDON, Adam (2017). « Pragmatic Functions of Gestures », *Gesture* 16:2, 157-175.
- MCNEILL, David (1992). *Hand and Mind*. Chicago: University of Chicago Press.
- MILTNER, Kate & Tim HIGHFIELD (2017). « Never Gonna Gif You Up: analyzing the Cultural Significance of the Animated GIF », *Social Media + Society*, July-September 2017, 1-11.
- SCHNEEBELI, Celia (2019), « Les modalités iconiques dans le discours médié par ordinateur: du neuf dans l'interaction ? », *Etudes de Stylistique Anglaise*, 13.
- TOLINS, Jackson & Patrawat SAMERMIT (2016), « GIFs as Embodied Enactments in Text-Mediated Conversation », *Research on Language and Social Interaction*, 49 : 2, 75-91.