EXPLORING THE PUNCTUATING EFFECT OF EMOJI IN SPANISH WHATSAPP CHATS

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ABSTRACT: Since the early days of the internet, researchers have been interested in the distinctive use of language in digital settings. One particular feature is the use of emoticons, sequences of punctuation marks that represent facial expressions and which have recently been replaced by emoji, little colourful pictographs. Despite their popularity, research on emoji is still in its infancy. The present paper contributes to the study of emoji by testing one of the findings identified in linguistic research on typographic emoticons, namely that they may function as punctuation marks in computer-mediated communication. A corpus of messages in Spanish sent through the smartphone application WhatsApp was retrieved and chats containing emoji were selected and analysed. Quantitative analysis showed that emoji were used similarly to final punctuation marks. Nevertheless, a discursive analytical approach to the corpus revealed that emoji and punctuation do not carry out the same functions.

KEYWORDS: emoji, punctuation, computer-mediated communication, discourse analysis

Explorando el efecto de la puntuación de los chats de whatsapp en español

RESUMEN: Desde la aparición de internet, los investigadores se han interesado por el uso peculiar de la lengua en los entornos digitales. Uno de los elementos más característicos de la comunicación digital son los emoticonos, secuencias de signos de puntuación que representan expresiones faciales, que recientemente han sido sustituidos por pequeñas imágenes en color, los denominados 'emojis'. Pese a su popularidad, la investigación sobre los emojis está todavía en ciernes. El presente trabajo contribuye al estudio de los emojis, intentando comprobar si se utilizan como signos de puntuación en la comunicación digital, como se ha supuesto para los emoticonos tipográficos. Para ello hemos analizado un corpus de mensajes de WhatsApp en castellano que contenían estos pictogramas. Los datos cuantitativos indican que los emojis se utilizan de manera similar a la puntuación final, sin embargo, una aproximación más discursiva al corpus muestra que los emoticonos gráficos y los signos de puntuación no llevan a cabo las mismas funciones.

PALABRAS CLAVE: emoji, puntuación, comunicación mediada por ordenador, análisis del discurso

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1. Introduction

Emoji are little pictographs that are added to electronic messages¹. They can be considered the graphical descendants of textual emoticons, sequences of punctuation marks that represent facial expressions, commonly used in different digital environments, as:). Emoji were created in the late 90s by Shigetaka Kurita, employee of the Japanese technological company Docomo, while he was working on the *i-mode*, the first mobile phone with internet connection. Kurita wanted to find a simpler solution for this new model of mobile phones than complex and ornate *kaomoji* (Blagdon 2013), the Eastern emoticons, also composed by punctuation or other signs, such as (). Kurita designed small pictures, which had the advantage of being counted as a single character by the system: unlike textual emoticons and kaomoji, which are created by users typing a sequence of characters, emoji are pre-set images (Nishimura 2015). In one of the first linguistic studies conducted on emoji, Miyake (2007) explains that since the early 90s these pictographs have surpassed the traditional *kaomoji* in instant messaging, especially in Japan and South Korea. Recent studies indicate that emoji nowadays are the most used emoticons in Japanese blogs (Nishimura 2015). Emoji have spread to other countries thanks to the standardizing labour of the Unicode Consortium, a non-profit organization created in 1991 with the aim of developing international standards for software and data (The Unicode Consortium 2015). The Unicode Standard unifies scripts across programs and languages, and emoji are one of the character sets specified by Unicode. Unlike textual emoticons and Japanese kamojii, a larger set is provided and emoji are available on different programs and applications, such as social networks, instant messaging, and some e-mail providers (The Unicode Consortium 2015). This set of emoji is periodically updated by the Unicode Consortium. Emoji have become so widespread in the digital world that Oxford Dictionary has selected the emoji labelled face with tears of joy as Word of the Year in 2015 (Oxford Dictionaries 2015).

Despite their popularity, little research has been done specifically on emoji (Nishimura 2015; Sampietro 2016a; 2016b). Nevertheless, numerous studies have analysed their textual counterparts, traditional typographic emoticons (Derks et al. 2007; Rezabeck and Cochenouor 1994; Dresner and Herring 2010; Yus 2014; Darics 2012), especially during what has been named the 'first wave' of research on the use of language in digital settings (Androutsopoulos 2006). At that time, the focus of researchers was the comparison of Computer-Mediated Communication (CMC) features with oral and written language. Due to their allusion to facial expressions, emoticons were considered a means to express emotions in CMC (cfr. Derks et al. 2007; Rezabeck and Cochenouor 1994). Nevertheless, subsequent research, grounded in pragmatics, found new functions for emoticons, such as hedges or contextualisation

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cues (cfr. Dresner and Herring 2010; Skovholt et al. 2014). In order to deepen the understanding of such pictographs, the present paper aims at testing for emoil one of the findings related to typographic emoticons, namely that they are used as punctuating devices in CMC (Provine et al. 2007; Darics 2012; Markman and Oshima 2007). Scholars examining the relationship between punctuation and emoticons inferred the possible 'punctuating' function of emoticons primarily from their position (Provine et al. 2007; Darics 2012) or the lack of normative punctuation marks in online communication (Vucheva 2014). The main argument of this contribution is that this approach to the study of emoticons may be lacking. On one hand, it has already been suggested that the comparison between CMC and standard written language in general omits peculiar features of computer-mediated discourse (cfr. Herring 2004). Although emoticons can be found at relevant pauses of the utterance (Darics 2012; Baron and Ling 2011), the position itself and the lack of other marks may not fully justify their assimilation with standard punctuation. In order to substantiate this argument, a corpus of messages in Spanish containing emoji retrieved from the popular smartphone application WhatsApp has been analysed.

1.1. Punctuation and emoticons in computer-mediated discourse

Since the 80s, the features of the language used in digital settings have caught the attention of researchers (cfr. Androutsopoulos 2006). Letter repetition, voluntary spelling mistakes, the unusual use of punctuation and emoticons are some of the fascinating characteristics of this new form of language (Crystal 2002; Darics 2012). At least for English, the advent of CMC accelerates an already existing trend toward a simplification of writing (Baron 2001). According to Baron (2003), written texts are becoming more speech-like, mirroring informal conversation. Regarding punctuation marks, in most CMC settings, punctuation is used in a non-normative way, either omitting grammatical punctuation or emphasizing its rhetorical use (Baron and Ling 2011; Vandergriff 2013; Figueras 2014).

In one of the first studies on punctuation in short text messages (SMS), Baron and Ling (2011) found that in their corpus many sentences did not contain punctuation marks, especially final full stops. In their SMS the most common punctuation marks were question marks, followed by full stops and ellipses; they counted some exclamations, and the use of emoticons was pretty scarce. Moreover, in the SMS analysed ellipsis were replacing a variety of traditional punctuation marks, especially full stops. Exclamation marks were repeated to signal involvement and smileys were located mainly at the end of the sentence (Baron, Ling 2011). Other studies on Internet Relay Chats (cfr. Vandergriff 2013) interpreted the non-normative use of punctuation as instances of emotive communication (Caffi and Janney 1994). Yus (2005) also considered the repetition of letters and punctuation as intensifying devices. On the other hand, the non-normative use of punctuation was assimilated with a wide range of functions by Darics (2012: 186-188), such as communicating non-verbal information or affective involvement and carrying out interactional tasks. Although it is difficult to

generalize the use of CMC cues (Vandergriff 2013), recent research indicates that new norms of punctuation in digital settings are emerging (Figueras 2014; Garrison et al. 2011). To analyse new punctuation trends in CMC in Spanish, Figueras (2014) drew on a pragmatic classification of punctuation marks into first-order (full stop, comma, colon, semicolon), second-order punctuation (parentheses, hyphen and quotation marks), and mood markers (question marks, exclamation marks and ellipses) (cfr. Figueras 2001). She found that in CMC first-order punctuation, whose primary function is the delimitation of discourse structures, is rarely found, second-order punctuation is quite absent and mood markers are mainly used with rhetorical effects (Figueras 2014). Alcántara Pla (2014), on the other hand, does not agree with this idea, as in his corpus of WhatsApp messages punctuation seemed to be used mostly to separate syntactic structures.

Regardless of the function of punctuation, emoticons or other cues, the results of these studies highlighted a key trend in the use of language in CMC: characters are sometimes omitted (this is noticeable in phenomena such as acronyms, abbreviations, omission of punctuation marks, etc.) or multiplied (letter repetition, more than one punctuation mark, addition of emoticons, etc.). According to Yus (2005), standard punctuation is unable to transmit attitudes and identity with the required intensity in chat conversations. In his opinion, the repetition of characters (either punctuation marks or letters) helps to guarantee that the message will be correctly interpreted by the receiver (Yus 2005: 158). An alternative and convincing explanation for this trend is provided by Baron and Ling (2011). In their opinion, the omission and multiplication of punctuation marks in CMC follows two principles: the principle of parsimony and the principle of information load. The first one justified the omission of punctuation marks if their absence did not hinder intelligibility²; on the other hand, according to the principle of information load, marks that carry more information such as question marks are retained.

Moreover, the progressive disappearance of punctuation is in sharp contrast with the rapid spread of textual emoticons since their first appearance in 1982 (Davidson 2012). Due to their increasing use, their configuration as sequence of punctuation marks, and the concurrent lack of standard punctuation, some authors have proposed that smileys may have be assumed the function of punctuation marks in CMC (Vucheva 2014; Figueras 2014). In fact, emoticons are located at the same pauses or phrase boundaries in which laughter occurs in spoken phrases (Provine et al. 2007). This phenomenon has been named by Provine (1993) 'punctuation effect', because laughter usually occurs where punctuation would be found in a transcript. Markman and Oshima (2007) found numerous keys to support this argument: emoticons often close off the sentence and are frequently used without additional punctuation marks. This play with punctuation and spelling in CMC has in their opinion a pragmatic

² In previous research on the history of English punctuation, Baron (2001) indicated another explanation for the progressive omission of punctuation. In her opinion, punctuation marks may slow the visual processing of the text.

function: instead of being emotions markers, as the etymology of the word emoticon (a blend of 'emotion' and 'icon') may suggest, emoticons may actually function as cues to indicate the tone of the sentence (Markman and Oshima 2007). This hypothesis was further developed by Dresner and Herring (2010), who proposed that emoticons may indicate the illocutionary force of the utterance. In recent years, other pragmatic functions have been proposed, as emoticons may be used for politeness (Darics 2012; Sampietro in press; Skovholt, Grønning, Kankaanranta 2014), to specify the propositional content of the text or the attitude of the speaker (Yus 2014), or to indicate the stance (Figueras in press).

The present paper has two main aims. From a general point of view, it aims to contribute to the existing, limited research on emoji and the study of digital discourse in languages other than English (Herring et al. 2013). More specifically, it analyses the differences between punctuation and emoji in a corpus of messages written in Spanish and sent through the popular smartphone application WhatsApp. Informal observation of the corpus suggested that emoji, as emoticons, are located at relevant pauses of the utterance, thus having a 'punctuating' function (Provine 1993; Provine et al. 2007). Nevertheless, in some cases, both non-normative punctuation and emoji are used in WhatsApp messages, suggesting that they may have different functions. If parsimony and information principles are still valid (Baron and Ling 2011), when both cues are used (emoji and repeated punctuation), they may carry out different functions. Qualitative and quantitative analysis of the use of emoji and punctuation marks in the corpus may help to explore the possible function of both cues. To sum up, the refined research questions are as follows:

- Q1: Are emoji located at the same place of regular punctuation marks, as already proven for emoticons?
- Q2: Are emoji used in substitution of regular punctuation marks or mainly with punctuation marks (either regular or used as cues)?
- Q3: Do emoji and punctuation marks carry out the same functions?

2. Methods

2.2. Corpus

The present study is based on a corpus of 303 interchanges sent through the application WhatsApp, composed of 3,151 messages and over 44,000 words³. WhatsApp is a

³ For the purpose of this study, the term "conversation" regarding WhatsApp interchanges will be avoided. Several authors have analysed the possible conversational nature of synchronous and asynchronous communication mediated by technology (cfr. Herring 2010), also regarding the Spanish language (Alcántara Pla 2014; Vela Delfa and Jiménez Gómez 2011). In order to avoid the comparison with oral language, in this paper

smartphone application that allows users to send written and audio messages, as well as images and videos, to other users through an internet connection. It is one of the most popular applications among Spanish smartphone users (Fundación Telefónica 2015). The corpus is composed of short dyadic exchanges written in Spanish by around 120 different users, and it was retrieved between December 2014 and April 2015⁴. Chats are generally among friends, family members, colleagues or classmates, thus positioning this work not only in the field of Computer-Mediated Discourse Analysis (Herring 2004; 2007), but also in the study of everyday conversation (Tannen 1984; Eggins and Slade 1997). Concretely, Computer-Mediated Discourse Analysis adapts methods from linguistics to digital corpora, in order to empirically analyse linguistic online behaviour (Herring 2004: 339). The paradigms applied to digital corpora are varied, including text analysis, conversation analysis, pragmatics, interactional sociolinguistics, critical discourse analysis, and, more recently, multimodal studies (Herring 2004; 2015).

The corpus collection procedure involved asking possible informants to send WhatsApp chats to the e-mail address of the researcher, using a function of the application. At the same time, they gave their consent to participate in the research. After copying the text of the chats into a *Microsoft Word* document, all messages were numbered and the exchanges in which emoji were displayed properly were selected. For the purpose of the present study, only chats which contained at least one emoji were considered. The 3,128 selected WhatsApp messages were grouped into 259 interchanges, based on temporal information, thematic criteria and the possible presence of greetings and farewells. The corpus included a total of 1,056 emoji.

2.3. Methodology

The present study used a mixed-method approach, combining quantitative data with qualitative observations. From the quantitative point of view, the presence of emoji and punctuation marks is observable and quantifiable. The analysis of the position of emoji helps to consider emerging conventions in the use of these pictographs, as already tested for emoticons (Garrison et al. 2011). Moreover, the concurrent presence of punctuation marks may help to test whether emoji replace or complement standard or non-standard punctuation (Baron and Ling 2011). Conversely, the analysis of the different functions of punctuation, cues and emoji should take into account the context of usage, thus moving the exploration to the qualitative side. Furthermore, emoji are

the term "interchange" will be used to indicate the different sequences in which the transcript of a WhatsApp chat may be divided. An interchange is composed by a sequence of WhatsApp messages. I consider a message to be each contribution made by one of the users that appears on the screen.

⁴ The corpus was collected when versions 6 and 7 of the Unicode standard were available to WhatsApp users. The frequent updates of the application may vary the set of emoji available, the size of which is increased regularly.

a relatively new research subject and qualitative methods are useful to approach new areas of inquiry in CMC research (Herring 2011).

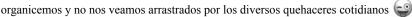
The analysis of the transcripts centred first on the placement of the emoji in the turn, following the categories used in previous research on emoticons (Markman, Oshima 2007; Provine et al. 2007). The focus of the analysis was only on the messages composed with emoji. Some of the users also included more than one emoji in a row. If emoji were repeated, they were analysed as a group and their position was considered globally. For example, two emoji in a row at the centre of a message were jointly considered as located in the middle position, as shown in example (1) below; as a consequence, the position of emoji was analysed in 874 cases. Four different positions were considered: 1) the emoji appears at the beginning of the message (initial); 2) the emoji appears at the middle of the message (middle); 3) the emoji appears at the end of the message (end); 4) the message is composed only of emoji (referred to as 'naked' emoticons by Provine et al. 2007 or 'standing-alone' emoticons by Markman and Oshima 2007). An example of a long message with several emoji is provided below (1), in order to understand the analytical method.

(1)

Roberto⁵: Hola! Estaba yo pensando que estaría bien jugar a algo una vez al mes (...)



Como somos unos jóvenes entregados al movimiento te lo digo ya para que nos





Roberto: Hello! I was thinking it would be nice to play at something once a month ()



(As we are a young people devoted to sport (Fig. 1) I tell you that so we can be organised and we won't be dragged by our numerous daily chores

In example (1) there are four emoji. The first two emoji are two grinning faces. As there are two emoji in a row, their position is considered as a single unit. As a consequence, the first two pictographs are classified as a middle position (written text precedes and follows). The second emoji is a relieved face emoji and it is located in

In order to preserve the privacy of the authors of the messages, all the real names and personal details of the users have been modified. As the corpus was transcribed in Microsoft Word, emoji appear in black and white, while in the application they are in colour. The collection of multimodal corpora is one of the challenges of the research on digital discourse (Vela Delfa and Cantamutto 2015). It is undeniable that the transcription method used in the present research clearly favours the verbal content over the visual (Flewitt et al. 2009), but it was not possible to collect screenshots of the chats. The familiarity of the researcher with the application and emoji has helped to take into account visual features of the messages during the analysis. Mistakes were not indicated with the conventional [sic], in order to respect the original spelling. All examples have been translated into English by the author.

the middle position as well. The third one is a *face with stuck-out tongue and winking eye* and it is located in the final position, as the message ends with the emoji.

Subsequently, in order to consider if emoji substitute for punctuation marks, it was calculated in how many turns emoji were associated with standard or non-standard punctuation. For the purpose of this study, non-standard punctuation was considered to be the repetition of question and exclamation marks, the use of ellipsis in contexts other than unfinished sentences or the repetition of more than three dots.

Following the quantitative analysis of the previous aspects (position of emoji, association with punctuation marks, normative or non-normative use of punctuation with emoji), some interchanges that include both punctuation and emoji were analysed, in order to investigate the function of both cues and compare their use. As part of this qualitative analysis, messages that do not contain emoji were also considered, thus broadening the analytical perspective and avoiding the chances of skewed results. The micro-analytical approach adopted in the qualitative analysis was inspired by Computer-Mediated Discourse Analysis (Herring 2004) and interactional sociolinguistics (Tannen 1993), as pragmatic and identity factors were the main focus of the qualitative inquiry.

4. Results

4.1. Quantitative analysis

The quantitative analysis centred first on the position of emoji in the corpus. The results (summarised in Figure 1) show that emoji are mainly placed at the end of the message: 478 emoji (55%) are located in this position.

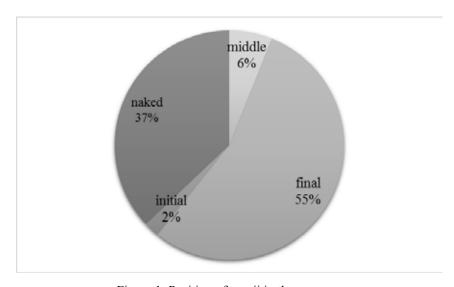


Figure 1: Position of emoji in the message

These results are consistent with previous research on emoticons and punctuation (Provine et al. 2007; Darics 2012). The second most frequent result was what Provine et al. (2007) call 'naked emoticons', messages composed only of emoji, which appear 324 times (37%). Emoji placed at the beginning and at the middle of the turn were scarce, at 19 (2%) and 53 times (6%) respectively. These provisional results seem to suggest that emoji are mainly used to close a message, similar to a full stop, but they may serve other, different functions as well. Moreover, while punctuation is not usually employed without any other verbal content, 'naked' emoji are strongly represented in the corpus (37%). In standard writing punctuation marks are not only located at the end of a text, but may also set apart utterances (Figueras 2001; Baron 2001). However, in this corpus emoji were not frequently presented in the middle position (6% of the cases).

In order to consider in more detail the possible punctuating function of emoji, the joint presence of pictographs and punctuation marks was considered. In the vast majority of messages, emoji were not associated to punctuation marks. Figure 2 shows that in 443 cases (81%) there were emoji, but no punctuation marks, as in the previous example (1). When punctuation marks were included, they generally were used regularly (75 cases, 14%). The co-occurrence with cues expressed by punctuation marks and emoji was scarce in the corpus (only 31 cases out of 874).

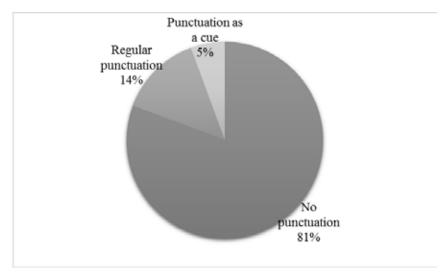


Figure 2: Emoji associated with punctuation marks.

These provisional results seem to indicate that emoji are used as an alternative to punctuation marks. Nevertheless, in some cases, both emoji and punctuation marks are used. Before concluding that emoji are replacing punctuation, the typology of marks jointly used with emoji should be considered. As shown in Table 1, the most frequent punctuation marks associated with emoji are exclamations (45 times),

followed by question marks (23 times). 18 full stops followed an emoji, 12 ellipses were used with the pictographs and in only 7 times were commas used with emoji. In this particular corpus, brackets were used only once while other punctuation marks (such as semicolon) were missing entirely.

Punctuation marks associated to emoji	Absolute frequency	
Comma	7	
Exclamation mark	45	
Question mark	23	
Brackets	1	
Full stop	18	
Ellipsis	12	
Total	106	

Table 1: Typology of punctuation marks used with emoji.

In their analysis of SMS, Baron and Ling (2011) observed that the punctuation marks most typically used were question marks. In their opinion, question marks carry important information (they indicate that the utterance is an interrogation), and are therefore most likely to be retained. Other punctuation marks in their corpus were either omitted or used with rhetorical effects. Figure 3 gives a closer look at turns that have cues expressed by both punctuation marks and emoji. Results show that in the corpus analysed by the present work, punctuation was used regularly (75 cases, 71%), but there were differences depending on the specific mark. Firstly, ellipses were mainly used as cues (used regularly twice, 17%, and 10 times in a non-normative way, 83%). This result is consistent with previous studies on ellipses, which seem to carry out a variety of functions in CMC when used as cues (Daries 2012), such as irony markers (Hancock et al. 2007), cohesive devices (Ong 2011), hedges (Ong 2011), discourse markers (Raclaw 2006) or emotive communication devices (Vandergriff 2013); the use of ellipsis sometimes is also comparable to the standard use of other punctuation marks (Baron and Ling 2011; Figueras in press). On the other hand, exclamations associated with emoji were used either as regular punctuation marks (24 cases, 53%) or repeated (21 times, 47%). Interestingly, the 23 question marks in the corpus were always used regularly when associated with emoji, as they were used to indicate questions, a result that is consistent with Baron and Ling's (2011) principles. Full stops were always used regularly. Other signs, as commas and brackets, were not considered, as in CMC they are usually not repeated.

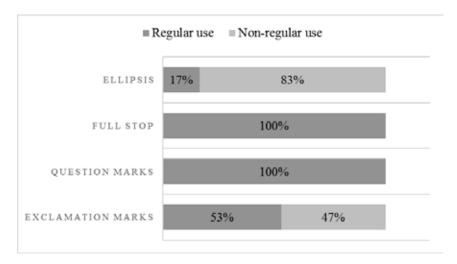


Figure 3: Patterns of use of punctuation marks with emoji.

Overall the results of the quantitative analysis seem to suggest that emoji are not substituting for punctuation in general, as they are mainly placed at the end of the message. Moreover, they may be used in isolation, which is normally not possible in the case of standard punctuation. As a consequence, they may be considered a new way to close up a message, as a new final punctuation mark. The fact that emoji are mostly used without further punctuation marks seem to reinforce this hypothesis. In order to analyse if emoji have a punctuating effect, the joint use of emoji and punctuation marks has been considered. Surprisingly, emoji are mainly associated to regular punctuation marks, especially in the case of question marks. A closer analysis indicates that some cues are still used, even in presence of an emoji, as ellipses and repeated exclamation marks. Following parsimony and information load principles (Baron and Ling 2011), similar signs may not be associated, so that if they are used at the same time, they probably carry out different functions. A detailed analysis of the use of different cues in the corpus is the focus of the following section.

4.2. Qualitative analysis

In order to further investigate the difference between emoji and punctuation marks, I have selected for the qualitative analysis sequences in which emoji and punctuation marks have been used at the same time. The examples presented below were selected to include different punctuation marks, namely emoji used with full stops, ellipses, exclamation marks and question marks. At the same time, the examples are representative of emerging discursive trends in the use of emoji observed in the corpus.

An occurrence of different punctuation marks and emoji is presented in example (2). Lena and Carla, both university students, have arranged a meeting at 9 pm, but they have to study for the forthcoming exams beforehand.

(2)

1. Lena: Carla, vienes quedamos para ir al Bar de Luis?



Carla: Siiiii 😃



3. Carla: Pero cuando acabe de estudiar 👺 📝 🗑



4. Lena: Vale, llama a Laura y demás y dile que sobre las 9 que a yo también tengo trabajos!!



1. Lena: Carla, do you want to go to Luis' café?



2. Carla: Yesssss 😃 😃



3. Carla: But when I finish studying 📚 📝 📝 📦



4. Lena: Okay, call Laura and the others and tell them about 9pm as I also have to work!!



The chat begins with Lena's proposal. Being a question, it ends with a question mark, a punctuation mark usually not omitted due to its informative value (Baron and Ling 2011)6. Two clinking beer emoji follow. Alcohol consumption is part of the social practices of young people in Spain (De Miguel 2001), so the allusion to the party frame in this case is metonymically realised by means of the beer emoji. They have planned to meet late because they both have to study. Enthusiasm for the meeting and anxiety for the exams are mixed in Carla's messages: the repetition of the vowel i in message 2 with the two smiling emoji emphasises the excitement for the encounter (Yus 2005), and a loudly crying emoji in the following message is associated with the fact that she has still to study before the meeting. Nevertheless, the books and notebook emoji in the same message include a playful note to the complaint, indicating at the same time a conscious use of the pictographs. Lena ends the conversation by confirming the meeting. She concludes with a double punctuation mark, a rising hands emoji and a crying face. The repeated exclamation is not necessarily an indication of a positive emotion, as stated by several authors (cfr. for example Hanckock et al. 2007), but, being a very subjective mark (Figueras 2001: 130), it probably indicates a general affective involvement (Darics 2012; Vandergriff 2013). The double emotive

Nevertheless, both Alcantara Pla (2014) and Sampietro (2016a) found in their Spanish language corpora several instances where question marks were omitted. It should be remarked that in oral Spanish, interrogations are only marked by intonation. In standard writing, an inverted question mark opens an interrogation and questions introduced by interrogative adjectives and pronouns include a diacritical accent (Real Academia Española 1999). The fact that in some cases even the final punctuation mark (the last element of a written question) is omitted is another example of the perceived orality of WhatsApp chats, besides the common use of verba dicendi, already observed in other CMC settings (Herring 2010).

orientation is further indicated by the emoji: the first, named person rising both hands in celebration, may refer to the meeting, yet the crying face emoji aligns with the anxiety expressed by Carla in the previous message. This example shows how emoji may be used to create alignment with the interlocutor (Georgakopoulou 2011), being an effective means to signal and consolidate the personal identities that both share (cfr. Tannen 1993): they are students as well as friends. In sum, punctuation marks in this example are used either to signal a question (message 1) or to add emotionality to an utterance (message 4); conversely, emoji are used in a creative and conscious way to signal the identities in play: Carla and Lena are friends (allusions to the meeting) and students (mentions of the exams and the stress). According to Figueras (in press), from a relevance-theoretic point of view, emoticons and rhetoric punctuation act at different levels: punctuation is related to the propositional content, while emoticons act at the social level. She affirms that emoticons are mainly used to convey social meanings in interaction, and example (2) from above shows that emoji are related to the verbal content as well. The wide variety of emoji included in the most common digital devices increase the possibility of this 'iconic' use⁷.

In the previous case, the emoji were linked to the verbal content: creative emoji were used and were visually or metonymically related to the message. Nevertheless, in some cases emoji, especially the popular yellow faces, do not refer in such a specific way to words or ideas, but may carry out discursive functions on their own. Example (3) is taken from an informal interchange between Tania and Emilio, former colleagues. After a question about his work, Tania asks Emilio for the name of a good restaurant on the seaside, where they went once. Emilio's answers are reproduced in the example. The subsequent messages (excluded from the quote) close the interchange (thanking for the information, regards and farewells).

(3)

Emilio: Hola Tania, por aquí viendo como se va a pique un modelo..... Bueno dejemoslo. Vamos a lo practico En la playa yo voy a la muñeca (pero cualquiera es bueno, la pepica, la rosa....) el telf no lo tengo aquí si lo quieres dime y te lo paso. Un y a ver si nos vemos

Emilio: Hello Tania, I'm looking at a model that is failing badly..... Well, let it be. Let's get to the point . Near the beach I usually go to la muñeca (but they are all good, la pepica, la rosa...), I don't have the phone number with me. If you need it let me know and I'll give it to you. A . and hope to see you soon

⁷ Darics (2012) retrieves a similar function for textual emoticons in her corpus. She calls this use "semantic function", while Figueras (in press) prefers to use the term "lexical-emphatic".

This example (3) includes three emoji, which are used differently. The first emoji, a winking face, may help to recover a friendly atmosphere, after complaining about his job (I'm looking at a model failing badly). None of the words of the preceding utterance refer to a wink, and therefore the function of the emoji is not merely an illustration of some explicit or implicit element expressed in the message, but acts at the pragmatic level and in fact downgrades the complaint (cfr. a similar example in Dresner and Herring 2010). The emoji is followed by a full stop, which may help to separate the utterances, fulfilling its regular function. The second emoji, named face throwing a kiss, is used as a substitution for the word kiss, and so has an iconic rather than a punctuating function. The final smiling face closes up the message and also enhances the polite farewell. This example shows that emoji are not merely punctuating devices, even if they are frequently located at relevant pauses of the message, and that they are associated to the verbal content of the message. The two examples presented until now show that emoji in the corpus do have a relation to the verbal content (sometimes in an explicit and iconic way) and they also have a social function, as signalling identities, giving a friendly halo to the interaction, or reinforcing farewells.

Notwithstanding, I agree with Figueras (in press) that emoji are mainly used in significant social contexts. As already observed in other European languages for emoticons (Komrsková 2015; Skovholt et al. 2014; Darics 2012), emoji were frequently used with polite speech acts, thanks, wishes, compliments, and other 'supportive actions' (Pomerantz 1978: 82), such as arrangement of meetings and sequences of phatic communion. Conversely, punctuation marks may be used in any context. This indicates that even though both emoji and punctuation marks may be semantically related to the verbal content, emoji are limited to social contexts, friendly interchanges and positive aspects. A further example is presented below (4).

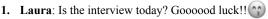
(4)

1. Laura: Es hoy la entrevista? Muuuucha suerte!!



2. Lorena: Gracias cariño (😂 😂





2. Lorena: Thanks honey 🖒 🖒

Laura wishes good luck to her cousin Lorena, who has a job interview. The wish is emphasized by the textual deformation (Yus 2005) of the adjective mucha, and further highlighted by means of the repeated exclamation mark, which acts as a quantity emotive device (Vandergriff 2013). The kissing emoji may have been added to indicate the desire to finish the interchange. In this case, punctuation marks are related to the verbal content (the question mark signals the interrogation and the exclamation marks

emphasise the wish), but the emoji convey a speech act on their own (saying farewell)⁸. In the corpus, kissing emoji are frequently placed at the end of a sequence, in order to signal the closing of the 'conversation'. This function is not always carried out by the emoji on its own, as the kissing emoji may also intensify a greeting already expressed verbally (cfr. example 3). The kiss is however the most frequent emoji in the corpus. This indicates that, as in face-to-face conversation (cfr. Schegloff and Sacks 1973), closings are an important part of the interchange and they should be negotiated, or at least signalled. In the second message quoted in (4), the smiling face introduced by Lorena may be used not only to intensify the expressive speech act (Skovholt et al. 2014), but also to accept the informal tone of the interchange signalled by Laura by means of the letter repetition, the repeated exclamations and the emoji. This example further confirms the presence of emoji in relevant social contexts, such as in phatic communion or with expressive speech acts.

It is remarkable that all birthday greetings retrieved in the corpus included emoji, as if the visual enhancement of the greeting has become a non-marked option. An example of a birthday greeting decorated with emoji and punctuation marks is presented in (5).



2. Madre: 🐸 😃 😅

3. Madre: Llama a casa porfa

4. Anna: En 5 m

5. Madre:

1. Anna: Happy birthday!!!

2. Mother: 🐸 😃 🤢

3. Mother: Call me at home pls

4. Anna: In 5 m

5. Mother: 😊

Punctuation marks may carry out a function on their own as well. As already observed by Darics (2012), a sequence of question and/or exclamation marks may be used to show astonishment.

In the above example, Anna is sending birthday greetings to her mother. She emphasises the congratulatory message by means of three exclamation marks and a sequence of emoji. Pragmatics studies of emoticons indicate that they may strengthen the illocutionary force of an utterance (Dresner and Herring 2010; Skovholt et al. 2014); at first sight, the sequence of emoji in the first message in (5) seems to have the same function. Nevertheless, Anna has already added to her greetings three exclamation marks, which act at the rhetoric level, adding emotionality to the message and enhancing her affective involvement (Yus 2005; Vandergriff 2013). Even though this cue already indicates emphasis, she also includes a sequence of different emoji: two hearths, a dancer, a crown, a balloon, confetti and a party popper, creating a visually noticeable sequence. In contrast to textual emoticons, emoji may be presented in sequence. In the corpus, sequences of emoji are common either when participants want to express excitement (for example when organising a party) or when they want to highlight greetings, as in this example. Moreover, some of the emoji added by Anna are visually related to the semantic field of the party (the dancer emoji, a balloon, confetti, a party popper). Anna's message is not only a birthday message (verbally expressed), emotionally and rhetorically emphasised by three punctuation marks, but also a visual performance, which alludes to the forthcoming celebration and places the message within the frame of the party (Danet et al. 2006). The interlocutor catches the informal and cheerful nuance of Anna's first message and answers by only adding three emoji: a smiling cat face, a smiley and a winking emoji with stuck-out tongue. By doing this, she continues the pleasant atmosphere. The final emoji is also used without any other written text, as a simple acknowledgment.

According to several scholars, one of the pragmatic function of emoticons is the mitigation of possible face-threats (Darics 2012; Dresner and Herring 2010; Skovholt et al. 2014). For example, emoticons are used with requests and orders with the purpose of softening these speech acts (Darics 2012; Skovholt et al. 2014). This use has been found in the corpus analysed, too, but not frequently (cfr. Sampietro in press), probably due to the informal context of the conversation or the specific characteristics of Spanish politeness (Bravo 2003; Briz 2006). In peninsular Spanish, omitting thanks or apologies, or formulating requests in a direct way, is not considered an impolite behaviour among close relations (Briz 2006). Example (6) is an instance of this mitigating use of emoji in the corpus. Aura complains that she and her flatmates are unable to unlock the cooktop.

(6)

1. Irina: Estoy de guardia y no te puedo llamar

2. Irina: Dime la marca de la vitro y lo busco

3. Aura: Ay, perdona 😓.

1. Irina: I'm on duty and I can't call you

- 2. Irina: Tell me the brand of the cooktop and I'll look for it too
- 3. Aura: Oh, I'm sorry 😓.

Aura strengthens her apology by means of the emoji *face with cold sweat*. She includes a final full stop to close the message: while the selected punctuation mark has a delimitative function, the emoji is related to the verbal content and visually strengthens the apology. As previously mentioned, strengthening apologies or mitigating possible face threats by means of emoji is not a frequent strategy used by the informants in this corpus. In this case, the relationship between the interlocutors should be taken into account: the informants in example (6) do not have a very close relationship, as Irina is Aura's landlady. This indicates that when analysing informal exchanges, generalisations about the use of emoticons, emoji or other cues should take into account the discursive context (the reason for the apology), the interpersonal context (the relationship between the interlocutors), as well as the social context (the Spanish culture).

The two last examples include messages in which ellipsis are associated with emoji, but in a peculiar way. A curious example of the presence of emoji and punctuation in negative politeness contexts is in example (7), in which a request is softened verbally with the punctuation marks, but the emoji seems to contradict the overall moderated tone of the request. In the previous sequence, Victoria told her friend Andrea that she presented a poster in a conference, but she had to leave. In this short interchange later, she asks Andrea to pick it up for her.

(7)

- 1. Victoria: Andrea, perdón por el estrés d esta mañana. había dormido poco y el lío del póster/comunicación en el congreso me ha trastornado un poco
- 2. Victoria: al final el póster se ha quedado allí, lo tienen en conserjería hasta q alguien lo recoja por mí... así q, si no t va muy mal, podrías pasar a recogerlo tú? luego cuando quedemos ya me lo das...
- 1. Victoria: Andrea, sorry about the stress of this morning. I've haven't slept much and the mess of the poster/paper at the conference upset me a bit
- **2. Victoria**: the poster is finally out there, the concierge is storing it until someone picks it up for me... so, if it's not too much trouble, could you please pick it up? Then when we see each other you can give it to me...

Victoria open her conversation with an apology for the tone of a previous message. It should be noted that the first message includes different punctuation marks: a comma

after the name and a full stop to separate the first utterance from the second. In the second message, the indirect formulation (the poster is at the caretaker's office until *someone* picks it up) and the ellipsis help to mitigate the petition for help. Nevertheless, she also includes a grinning emoji. This pictograph helps to signal that the anonym *someone* that Victoria intended is her interlocutor. While the ellipsis and the indirect formulation work together to mitigate the potential threat of the request, the emoji uses a completely different strategy: it includes a friendly halo and clarifies the petition. At first glance, the emoji seems to contradict the indirectness expressed verbally and by the punctuation marks. Nevertheless, both strategies are acting together to obtain the same objective (asking Andrea to collect the poster), but using two different politeness strategies: softening the request (by means of the indirect formulation and the ellipsis) and referring to the friendly relationship (using the emoji). The smile is a call for solidarity among friends and family members, an important value in Spanish culture (Bravo 2003).

Emoji can also be added simply to enhance the playful atmosphere of the messages. The following example (8) highlights an idiosyncratic use of ellipsis with emoji. María asked her brother for information about a running competition to report to her friend Emilio. María is now happy to inform Emilio that she has finally received an answer to her repeated WhatsApp messages from her brother after waiting for 8 hours.

María: Mi hermano me ha contestado..... dice k hasta k no hable con uno, no lo sabe.....

María: My brother has replied to me.... he says that until he talks to a guy, he doesn't know....

The visual enhancement of the emoji may be the function of the numerous ellipsis presented in (8), as the repeated full stops (5 before and 4 after the emoji) visually isolate the pictograph. The emoji is described by the Unicode standard as person rising both hands in celebration. The use of the emoji is clearly iconic, as she celebrates having been answered. The pictograph helps to indicate the attitude of the speaker regarding her brother's answer. At the same time, the informant is aligning with the interlocutor: the delay in the response is unacceptable, but it is due to her brother (preserving her face as an attentive friend) and his response, however late, can be celebrated, even though he cannot help with Emilio's request. Choosing an emoji that mirrors a gesture of celebration adds a playful atmosphere to the sentence and putting the emoji between a series of ellipsis visually accentuates this humorous usage. Even though this use of the ellipsis may be considered a personal stylistic choice made by María rather than a trend in the corpus, it is undeniable that the selection of the emoji is motivated by its visual appearance, as previously seen in the birthday greetings (example 5) or in the interchange between the students (example 2). Interestingly, both examples (7) and (8) show that ellipsis cannot be dissociated from the emoji they go with. To sum up, idiosyncratic uses of emoji or punctuation may also exist,

but the paper has highlighted some emerging trends. Example (8), concretely, shows that emoji may be related to the verbal content, are used in relevant social contexts, are sometimes related to politeness rules, and normally express a positive atmosphere.

5. Conclusion

The present research was conducted to investigate the use of punctuation marks and emoji in a corpus of WhatsApp interchanges. The quantitative analysis of the corpus partially confirmed previous findings regarding the placement of emoticons (Provine et al. 2007; Markman and Oshima 2007): emoji are mostly placed at the end of the message and to a lesser extent in isolation. The quantitative analysis also showed that emoji are preferably used without punctuation marks. At first, this result may suggest that emoji are used as a new punctuating device. However, the analysis showed that emoji were almost always used without punctuation marks; when punctuation marks were associated with emoji, their use was regular, above all in the case of question marks and full stops.

The analysis of some interchanges that contained both nonverbal cues and emoji tried to distinguish their functions and differentiate the use of emoji from punctuation marks. As a consequence, messages from the corpus including emoji and punctuation, regardless of how regularly they were used, were closely analysed. The first important difference between emoji and punctuation is that pictographs are primarily used in social contexts, either with positive speech acts or in contexts such as planning for a meeting, enhancing group identity, and in sequences of phatic communion. In opposition, punctuation marks may be used in a wider variety of situations, since they do not allude to a positive atmosphere per se, as emoji seem to do. Nevertheless, contrary to previous findings by Figueras (in press), emoji in the corpus were sometimes visually related to the verbal content of the utterance, as they may be used iconically to repeat or allude to the ideas or words expressed in the text. This use was employed by informants to align with the interlocutor, to express informality or to enhance phatic communion and expressive speech acts, especially greetings. Apart from their visual salience, emoji carry out a variety of functions that are not shared by punctuation marks, even if used as cues. For example, from a formal point of view, emoji may be repeated more than once and can be used without verbal content; moreover, emoji are able to function as greetings or farewell on their own and they may be used to strengthen or mitigate different speech acts, depending on the context or the relationship between the interlocutors.

The analysis also includes some instances of idiosyncratic use of punctuation marks and emoji. In one case, the mitigation of a petition was realised by the ellipsis and the emoji rewired the interchange to a friendly atmosphere; in another case the primary function of the ellipsis was the visual enhancement of the emoji. Regarding the use punctuation marks, full stops in the examples are used regularly to separate utterances or to close a message and they are presented before the emoji. Question

marks are used regularly to indicate an interrogation, while exclamations generally add emotionality to the verbal content they are associated to. Ellipsis are used either regularly or irregularly, but in the examples presented they did not seem to be considered independently from the related emoji.

In conclusion, answering the research questions presented at the beginning of this paper, emoji are mostly located at the end of the message, such as emoticons. They are not used with punctuation marks, either regularly (full stops, commas, question marks, sometimes exclamation marks) or irregularly (ellipsis, sometimes exclamation marks). Nevertheless, emoji are not simply digital punctuation marks: they are used in social and positive contexts, their functions are varied, and they may have a clear verbal anchorage.

The present study has several limitations. At first, the quantitative analysis only focused on messages with emoji. A more complete analysis of the patterns of punctuation on WhatsApp should include the analysis of all messages, retrieving the number and typology of punctuation marks used in the corpus. A complete analysis of the punctuation patterns in the interchanges (either regular or irregular) may also give a broader perspective on the use of punctuation and emoji in CMC. Moreover, emoji are little images, so their visual characteristics should be considered; therefore, a multimodal approach to the study of emoji may be more appropriate (Sampietro 2016b; Sampietro 2016a; Maíz Arévalo 2014; Herring 2015). Finally, technical features, such as the users' specific smartphone settings, may also influence some results and should be taken into account as well. With all that in mind, one of the main contributions of the present research is that it does not focus on a single phenomenon, but instead considers a combination of different cues, a necessary step to understand the complexity of CMC (Vandergriff 2013; Riordan and Kreuz 2010; Kalman and Gergle 2014). Moreover, this study provides some insights on the features of private communication mediated by technological devices, a topic largely underexplored (Georgakopoulou 2011), focusing especially on two widespread but uncharted tools, WhatsApp and emoji.

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