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ESTUDIOS

The Use of Emoji Across Age Groups: Insights from the Exchanges of Music Fandom in Twitter/X Discourse

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Abstract: Emoji have recently gained in popularity in digital communication. However, while age has been considered in emoji studies, mainly in relation to frequency and preference, its role in shaping emoji meaning, and its connection with the topic in question, position and pragmatic value within Twitter/X discourse remain underexamined. This study addresses the gap by considering how different age groups use emoji in the Twitter/X discourse context of music fandom.

Two samples of data are analysed: one consisting of posts from the accounts of three British rappers in their mid-twenties, and the other comprising tweets from three well-known London singers born in the 1950s and 1960s.

Findings suggest that age, which has consistently been found to play a significant role in offline communication, also influences the use of emoji in Twitter/X. Indeed, very notable differences here were observed between the two groups. The categories of 'Hearts', 'Music & Films' and 'Celebrations' occur more frequently among the mature adults of the sample, whereas those of 'Fire' and 'Hands & Fingers' are more commonly used by the younger adults. Additionally, the former group seems to favour 'standalone' emoji as responses to previous messages. Pragmatically, subjective functions are more prominent among the participating mature adults, whereas intersubjective functions are more frequent with the younger users.
Keywords: age, computer-mediated communication, digital discourse, emoji, Twitter/X.

ESP El uso de los emojis en distintos grupos de edad. Análisis de los intercambios del fandom musical en el discurso de Twitter/X

Resumen: Los emoji han ganado recientemente popularidad en la comunicación digital. Si bien el papel del factor edad ha sido tenido en cuenta en los estudios sobre emoji, sobre todo en lo que respecta a su frecuencia, otros aspectos como su selección, su incidencia en la configuración del significado, su relación con el tema tratado, la importancia de su posición y su valor pragmático dentro del discurso de Twitter/X son rasgos todavía poco explorados. Este trabajo intenta cubrir este vacío analizando cómo usuarios de distintos grupos de edad emplean los emoji en Twitter/X en el contexto discursivo concreto de los aficionados a la música.

Se analizan dos muestras de datos: una formada por publicaciones de las cuentas de tres raperos británicos de unos veinticinco años, y otra formada por tuits de tres cantantes londinenses más veteranos y conocidos, nacidos en las décadas de 1950 y 1960.

Los resultados sugieren que la edad, que tradicionalmente se ha revelado como un factor importante en la comunicación presencial, también influye en el uso de los emoji en Twitter/X. De hecho, se observaron aquí diferencias muy significativas entre los dos grupos de usuarios. Las categorías de "Corazones", "Música y cine" y "Celebraciones" aparecen con mayor frecuencia entre los adultos maduros de la muestra, mientras que las de "Fuego" y "Manos y dedos" son más utilizadas por los adultos jóvenes. Además, el primer grupo parece preferir los emoji en solitario o de forma independiente, como respuesta a mensajes previos. Desde un punto de vista pragmático, las funciones subjetivas son más prominentes entre los adultos maduros, mientras que las funciones intersubjetivas son más frecuentes en los usuarios jóvenes.
Palabras clave: edad, comunicación mediada por ordenador, discurso digital, emoji, Twitter/X.

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1. Introduction

With the advent of *Information and Communication Technologies* (ICTs) and *Computer-mediated Communication* (CMC), and with the emergence of smartphones and other electronic devices as a replacement for face-to-face communication, other ways of expressing emotions and interacting with others in the digital world have made an appearance. Therefore, 'traditional' non-verbal cues such as gestures, facial expressions, prosody, etc., have given way to others, e.g., the use of CAPITALIZATION, multiple exclamation marks, word and letter lengthening, to mention a few. More recently, the use of additional non-verbal cues has arisen as a kind of "compensatory mechanism" (Chen et al. 2024, 1) in online interaction, these including emoticons, emoji, stickers, GIFs and memes, with emoji being the most widely used of these. In fact, emoji have been described as "what intonation, facial expression and body language are to spoken interaction" (Jaeger et al. 2018, 397), in that they have come to be used instead of the kinds of gestures and prosody available in face-to-face interactions.

Emoticons and emoji can be regarded as two distinct types of graphical icons, or *graphicons* (Herring and Dainas 2017). While the former, in existence since the early 1980s, are symbols created using punctuation marks, letters and numbers (ASCII characters) to represent facial expressions, emotions and abstract concepts, the latter, which have been around since the late 1990s, are coloured graphical symbols, with names and Unicodes, and cover a wider range of emotions than emoticons. Emoji are not only used to represent objects, animals and plants, but also an array of facial expressions, actions, moods, attitudes, emotions and even abstract concepts such as love, solidarity, embarrassment, concern, thus allowing users to enrich their digital communication with nuanced social and emotional cues, e.g., 😍, 🥰, all this "in an economical way" (Yus 2022, 77). This means that the use of emoji is not "gratuitous" but "intentional", so they serve different pragmatic functions "that would otherwise be difficult to convey using only typed words" (Yus 2022, 78); in other words, their meaning has to be worked out in context (2022, 79).

In the present study, the use of emoji in Twitter/X discourse will be explored by addressing the age factor, as previous studies suggest it may play a significant role in the use of this relatively new communicative device (Zhou et al. 2017; Weiß et al. 2020; Aljasir 2024). Age appears to influence aspects such as emoji frequency, familiarity, usage patterns, conveyed meanings, perception, comprehension, and interpretation (Cui 2022; Boutet et al. 2024; Chen et al. 2024; Wu et al. 2024; Yus 2025). However, this factor remains somewhat understudied within the context of Twitter/X music fandom practices, a growing phenomenon that merits further investigation due to its high volume of interaction and its relevance in contemporary digital communication (Click and Scott 2017). In fact, Twitter/X is used "most predominantly as a technology of fandom", as a medium that facilitates "the connection and communion of fans" (Highfield, Harrington and Bruns 2013, 315).

The paper is organised as follows. Section 2 provides a review of emoji in the literature, focusing on their definitions, factors influencing their use, plus their functions and interpretation. Section 3 outlines the main aims of the study, while Section 4 discusses the methodology used. Section 5 presents the main results, addressing issues such as the contexts and topics in which emoji are most commonly found, the types and variety of emoji, their position in posts, and their pragmatic functions. Section 6 summarises the key findings and offers some conclusions. Finally, Section 7 discusses the main limitations of the study and proposes possible avenues for future research.

2. Emoji in the literature

2.1. Definition and factors influencing their use

Defined as "vibrant and quickly developing elements of written communication" (Wiese and Labrenz 2021, 295), emoji are pictographs which have quickly become central to current digital communication. This has led some scholars (e.g., Zappavigna and Logi 2024) to consider them as an essential part of a communicative system that seems to be the nearest to a universal language, i.e., a sort of 'paralanguage', or even an 'independent' language, at least according to others (Seargeant 2019, 11). In this regard, Khandekar et al. (2019) launched a social media app called *Opico* to investigate emoji-first communication, i.e., to show that emoji can function independently in communication, without the need for accompanying text. In contrast to this, other research diverges from this line of thought. Dainas and Herring, for example, conclude that in terms of their pragmatic use, emoji function as a part of online language, and do not constitute "a stand-alone language system" (2021, 139), while Yus (2022, 78) agrees that "it is difficult to qualify emojis as a language", especially because there seems to be a lack of agreement on how they should be interpreted, as well as on their intended meanings in terms of their conventionalization. Several other scholars, with minor variations, also

share a similar view. Evans (2015), for instance, describes emoji as a "language adjunct", that is, a visual mode that complements verbal language, whereas Danesi (2016) argues that emoji constitute a "quasi-language" with symbolic but no syntactic power. Similarly, Gawne and McCulloch (2019) treat emoji as part of digital body language.

Their use has been addressed from different sociolinguistic, individual and contextual perspectives, considering aspects such as nationality, degree of formality, relationship between users, gender, age, race (Robertson et al. 2020; Miltner 2021), mood (people use emoji more often when they are in a good mood; cf. Konrad et al. 2020), or psychological traits (e.g., extraversion has been correlated with the use of 'positive' emoji; cf. Li et al. 2018), and indeed others, such as the construction of identity (cf. Ge 2019) and the choice of platform.

A lot of research into emoji has focused on users' gender, one finding here being that women use them more frequently than men (Tossell et al. 2012; Prada et al. 2018; Rodrigues et al. 2018; Pérez Sabater 2019: 168; López Rúa 2021; Marko 2022; Ferré et al. 2023: 1716; Aljasir 2024), and that women prefer certain emoji (López Rúa 2021; Koch et al. 2022; Marko 2022; Padilla 2023) whereas men tend to use a wider range (Tossell et al. 2012). Other studies, in turn, claim that gender plays no significant role in what concerns emoji use (e.g., An et al. 2018; Aretz and Mierke 2019).

It is well known that the role of age has been widely discussed in the analysis of offline communication, and this also seems to be the case in some digital genres, as studies are found in the context of instant messaging apps like WhatsApp and WeChat (cf. An et al. 2018; Siebenhaar 2018; Pérez Sabater 2019; Koch et al. 2022; Emmanuel and Isiaq 2024; Wu et al. 2024, to mention a few), as well as in other social media like Instagram or Facebook (Setanni and Marengo 2015; Oleszkiewicz et al. 2017). On the one hand, Koch et al. (2022), in a study based on a dataset of 309,229 WhatsApp messages, conclude that emoji expressing emotions were more frequent among younger participants, whereas those depicting objects and people were more common among older users. In the same vein, Hougaard and Rathje, using data retrieved from Facebook and Instagram, report that Danish adolescents and young people, who have grown up with emoji, use them to show their moods and emotions, while adults regard them "as a secondary language" (2018, 773). Likewise, Zhou et al. (2017) and Weiβ et al. (2020) have shown that emoji use is more frequent among younger users when they communicate digitally, which coincides with Aljasir's findings (2024, 280) on "the role of generations in the usage of emojis", in that the younger ones use them more frequently, as opposed to the older generations, who use them "for a wider range of purposes". On the other hand, there are scholars who claim that age plays no relevant role in emoji use (cf. An et al. 2018; Jaeger et al. 2018; Pérez Sabater 2019, among others), and hence that they should be considered as a universal form of communication, regardless of the age of users.

However, as mentioned above, in what concerns the Twitter/X platform, there are not so many studies that focus exclusively on the relationship between age and emoji use in this social media, let alone in the particular context of music fandom. Research is found that claims that the use of emoji decreases as the user's age increases (Prada et al. 2018; Marko 2022), which may be indicative of generational differences (Herring and Dainas 2018, 2020), but this is something that needs to be further explored. It is our aim here to contribute to this topic by analysing emoji retrieved from different Twitter/X accounts so as to provide a comprehensive insight of their use based on the age factor.

2.2. Functions of emoji

Emoji serve a variety of functions in CMC (Togans et al. 2021). Apart from being used for fun or social purposes (Tang and Hew 2019), Ferré et al. (2023) refer to two main communicative functions: (i) to reduce the potential ambiguity of a message, and (ii) to contribute to the emotional content of messages, in that many of them carry an affective meaning (Novak et al. 2015; Jaeger et al. 2019; Dainas and Herring 2021). In fact, research has shown that emoji prevail over words when it comes to the expression of emotions (Evans 2015), so they are frequently used as "emotion signifiers" (Li and Yang 2018, 1), especially in the case of millennials, who use them primarily to express emotions (Bosch and Revilla 2018, 16). At the same time, they have also been seen as resources to strengthen interpersonal relationships (Sampietro 2019; Wiese and Labrenz 2021), thus serving as interaction devices. On similar lines, Zappavigna and Logi (2024, 1, 3) argue that, combined with co-text, emoji may express a variety of complex meanings, in that they are capable of encapsulating, categorizing and evaluating information provided in the text. Emoji also play an important role in the negotiation of social bonds (2024, 208) and in conversation management, i.e., discourse-domain functions (cf. Sampietro 2019).

More elaborate taxonomies of pragmatic functions of emoji can be found in Herring and Dainas (2017), and Dainas and Herring (2021). While the former includes nine pragmatic functions (tone, modification, reaction, action, mention, riff, sequence, ambiguous, and other), the latter refines these categories and adapts them to the purposes of the *Understanding Emoji Survey* conducted in Dainas and Herring (2021). More recently, and illustrating a different approach, Herring and Ge-Stadnyk propose a systematic pragmatic classification of emoji which offers a unified account of functions that are usually treated separately in the literature. Thus, their typology draws on "the classic speech act notion of illocutionarity" (2024, 124), and accounts for the three basic types of emoji function: (i) they can modify a textual utterance; (ii) they can constitute a standalone speech act ('free-standing' emoji); and (iii) they can virtually perform an action.

A review of recent taxonomies of functions of emoji can be found in Yus (2022, 81-82; cf. also 2025, 49-126); based on these, he builds up his own threefold pragmatic classification (2025: 52): (i) emoji *within*; in this

case the use of emoji aids in the interpretation of the accompanying text; (ii) emoji *without*; here emoji do not need an accompanying text, as they are found on their own (so-called "naked" emoji; 2022, 91); and (iii) emoji *beyond*, with emoji fulfilling a textual function, thus exceeding or going beyond the content of a message and connoting "the act of communication as a whole" (2022, 95). Within these three broad functions, several subcategories are also distinguished (2025, 59-112).

2.3. Meaning and interpretation of emoji

Other lines of research involve the use of emoji in light of their possible interpretation (cf. Chen et al. 2024). Accordingly, age, gender and culture all have a significant impact on how emoji are perceived or understood. However, Herring and Dainas (2020) claim that the variable of gender, for example, does not play a significant role in the interpretation of emoji in Facebook messages, while age does.

Emoji with the same apparent meaning can be represented in different visual ways depending on the social media in question, and discrepancies are also likely to arise in terms of the perceptions of recipients (cf. Rodrigues et al. 2018; Jaeger et al. 2019, among others). Likewise, younger users may resort to an "obscure emoji use" (Herring and Dainas 2020, 21) as part of an in-group code, very much a characteristic of youth language.

Another interesting area of research considers emoji as discourse markers (cf. Wiese and Labrenz 2021; cf. also Dainas and Herring 2021). Wiese and Labrenz (2021), following Traugott's (2010) model of verbal pragmatic markers, point to an ongoing process of 'intersubjectification' of emoji, given their frequent position in the right-periphery of the sentence which supports their role as emergent pragmatic markers. Thus, studies that deal with emoji position in discourse include, among others, Zhou et al. (2017), Dresner and Herring (2010, 2014) and Na'aman, Provenza and Montoya (2017). Their results show that emoji are mainly found at the end of utterances and also how position contributes to their metalinguistic and illocutionary roles.

2.4. Emoji databases and corpora

It is also worth mentioning that over the last few years a number of databases, corpora, and surveys of emoji have emerged, especially in the realm of sentiment analysis. One of the best known is the *Lisbon Emoji and Emoticon Database* (LEED; Rodrigues et al. 2018). Another is *Emoji Twitter Dataset*, developed by Chen, Tseng and Yang (2018), a collection of emoji retrieved from a large number of tweets, annotated for sentiment and pragmatic functions. In turn, Ferré et al. have introduced *Emoji-SP*, a tool which aims to provide researchers with "a data-driven way to select emojis that are well characterized in affective and non-affective dimensions" (2023, 1726).

Wiese et al. (2019) developed the *RUEG* corpus, while Zappavigna (2012), and Zappavigna and Logi (2024) based their research on four corpora, including the *Sydney Emoji Corpus*. Finally, we should not overlook tools such as *Emojitracker*,[1] "a website that monitors the use of emojis on Twitter in real time" (Novak et al. 2015: 4), *Emojipedia*,[2] an emoji reference website, and *EmojiNet*, a machine-readable dictionary of emoji meanings which constitutes a rich resource for semantic or pragmatic research.

3. Aims

The main objective of the current paper is to determine whether age plays a role in the use of emoji in the Twitter/X discourse context of music fandom, that is, whether their use, frequency, position and function vary according to the age group considered. More specifically, we draw comparisons between the type, meaning and communicative functions of emoji in younger versus mature adults.

As mentioned above, the age variable is traditionally regarded as a significant factor in sociolinguistic analysis, and as such has received extensive attention in offline communication. However, this has not always been so much the case in online communication, and, more particularly, in research on emoji. In the study of emoji, attention has been paid to various individual variables, such as posters' gender, personality, social and cultural background, and the platform used (Herring and Dainas 2018; Prada et al. 2018; López Rúa 2021; Zappavigna 2012; Zappavigna and Logi 2021, 2024); the age factor, however, in the particular context of music fandom discourse has been underrepresented in the literature, which justifies our study. Thus, we will analyse, among other features, the contexts and topics in which they occur (Section 5.1), the connection between tweet length and emoji (Section 5.2), the frequency (Section 5.3), type and variety of emoji (5.4), as well as their position in posts (5.5). Special attention will also be given to their semantic and pragmatic functions (5.6) across both age groups, i.e., younger vs. mature adults (cf. also Section 2.3).

4. Method

This study builds upon our previous research (Palacios Martínez and Núñez Pertejo 2024), which examined the role of age in Twitter/X discourse by analysing various morphosyntactic, lexical, and spelling parameters.

The control of the age variable is itself problematic, in that neither gender nor age are explicit or necessary fields in Twitter/X profiles, unlike (pseudo)name, location and a short bio. Indeed, this may be one of the reasons why the age factor has not been discussed so much in detail in previous studies, except for those which may use additional research instruments such as surveys (e.g., Zhukova and Herring 2024), or conduct specific experiments with small groups of children and adults (Verheijen and Mauro 2025).

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1 http://emojitracker.com/
2 https://emojipedia.org/

To control for age, we contrasted the Twitter/X messages posted to the accounts of three young (in their mid/late-twenties) British rappers (Berwyn, BackRoad Gee and Enny), these representing young adults, with a similar sample of Twitter/X posts from the accounts of three mature British singers (Elton John, Phil Collins and Samantha Fox). As public figures, these six individuals all had verifiable ages. We hypothesised that by contrasting the posts of these two groups of users, the age variable would be perceived. Sociodemographic data on the audiences engaging with the artists' posts were also gathered from various audience platforms, industry reports, and sales analyses, including YouGov, ChartMasters, Nielsen, and Kantar. The latter provided information on fan engagement metrics, fans' origin and age, lifestyle traits, brand affinities and media habits.

Apart from the age differences among the members of these two groups of singers, it is important to consider other factors that could also have an impact on the use of emoji, such as music genre (rap versus pop/rock), status (emerging versus established), ethnic, identity and personal differences. Thus, the young adults of our sample, in addition to being rappers, are all black and come from different ethnic backgrounds, Trinidad, Nigeria and Congo. Race, ethnicity and sexual orientation could then play a role as these variables may also affect emoji use significantly. General information on the six artists selected for the study is provided in Table 1 below.

Table 1: General background and biographical information of the six artists considered

Artist's name	Stage name	Twitter/X name	Age[3]	Gender	Origin & background	Followers & achievements
Enitan Adepitan	Enny	Enny (@annyintegrity)	28	F	Nigerian origin, born and raised in London.	9,589. Her song "Peng Black Girls" had over a million views on YouTube. Nominated as the female artist of the year at the GRM Daily Rated Awards in 2021.
Not available	BackRoad Gee	BackRoad Gee@ backroadgee	26	M	Raised in London of Congolese background.	12.1K. His song "Party Popper" was viewed over 2 million times on YouTube.
Berwyn Du Bois	Berwyn	BERWYN@berwynberwyn_	26	M	Based in East London from the age of 9, Trinidadian origin.	2,396. Third in the BBC Sound of 2021 list. Nominated for "Best Newcomer" at the MOBO Awards.
Elton John	Elton John (original name Reginald Kenneth Dwight)	@eltonofficial	76	M	Born in London.	1.1M One of the most popular artists in the history of popular music, with a career extending over 50 years, 32 albums, and more than 300 million copies sold.
Phil Collins	Phil Collins (original name Philip David Charles Collins)	@PhilCollinsFeed	72	M	Born and brought up in west London (Chiswick, Hounslow, Middlesex).	207.9M. British songwriter, actor and singer. Between 1982 and 1990, Collins scored 3 UK and 7 US number-one singles as a solo artist. He had more US top 40 singles than any other artist during the 1980s.
Samantha Fox	Samantha Fox (original name Samantha Karen Fox)	@SamFoxCom	57	F	Born in London.	76.9K. International vocal artist, songwriter and entertainer. Former actress and model.

We focused on the posts uploaded by these six artists, as well as all responses to them, between June 2020 and February 2023, that is, over a period of almost three years, much of which coincided with the COVID-19 pandemic, a time when interactions on Twitter/X increased significantly as highlighted by some projects such as GDELT (*Global Database of Events, Language, and Tone*).[4] Retweeted messages were discarded, since in many cases it was not possible to establish their origins accurately.

A total sample of 1,500 posts (250 per artist) was manually compiled. Of these, 897 were discarded because they did not contain any emoji, resulting in a final sample of 603 valid posts containing at least one emoji. This final dataset included approximately 100 posts per artist account, distributed as follows: BackRoad Gee - 100 posts, Berwyn - 105, Enny - 100, Phil Collins - 102, Elton John - 99, and Samantha Fox - 97.

[3] This corresponds to the age of the artists selected when the collection of data was completed. The same applies to the rest of the information here included.

[4] https://blog.gdeltproject.org/visualizing-twitters-evolution-jan-2012-jan-2021-and-a-look-at-the-impacts-of-covid-19-election-2020

More precisely, the dataset includes tweets posted by the six artists themselves as follows: Enny and Berwyn (24 each), Samantha Fox (23), BackRoad Gee (9), Elton John (16), and Phil Collins (5), amounting to a total of 101 posts (16.7% of the sample). The remaining 502 posts (83.3%) consist of fans' replies to the artists' tweets. In spite of the disparity in artists' follower counts, with Phil Collins and Elton John as the most 'popular' singers in terms of fandom, we believe the previous sample can be regarded as sufficiently representative for the purposes of this paper. In the case of widely recognised stars, namely Elton John, Phil Collins, and Samantha Fox, we ensured that the selected tokens corresponded to tweets posted by the artists themselves rather than by their public relations or community managers. This distinction was quite noticeable due to the tone and content of the tweets. Those posted by community managers sounded more official and dealt mainly with information on shows and advertising, whereas those uploaded by the artists themselves were more personal and showed their responses and feelings. Rappers, in turn, reciprocate tweets by updating information, sharing personal thoughts and feelings, i.e., by engaging in constant conversation with their fans and followers.

For the analysis, a database was designed and created, taking into account the following parameters:
(i) Information on the poster: including their nickname and, when possible, gender, age, and origin/location.
(ii) Information on the tweet: factors such as length (number of words), month and year of publication, and topic of discussion.
(iii) Information on the emoji: the number in each post, type, right and left collocates, position in the clause (initial, medial, final, 'standalone'/'naked emoji'; Yus 2011), and their semantic and pragmatic functions (e.g., expressing rapport, solidarity, gratitude, emotion, humour, sarcasm, irony, intensification or aesthetical), according to existing literature (Traugott 2010; Alshenqeeti 2016; Herring and Dainas 2017; Dainas and Herring 2021; Herring and Ge-Stadnyk 2024; Zappavigna and Logi 2024; Yus 2022, 2025; cf. also Section 5.6).
(iv) Additional remarks: observations that caught our interest, but which were not covered by any of the previous fields.

Below is a screenshot of the dataset created for coding the data according to the different criteria.

EMOJIS_EMOTICONS_TWITTER | EMOJIS_EMOTICONS_TWITTER

Id	Poster	Retrieved @	Date of post	Age	Origin	Gender	Example	Number of w	Type	Emoji	Emoticon ;)	Topic	Nur
1	PandaCole	ENNY	DECEMBER 202	YOUNG ADULT	AFRICA	MALE	I'm here for the	9	EMOJI	FIRE		TALKING ABOU	
2	unknown	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	UNKNOWN	UNKNOWN	No sliding back	3	EMOJI	FIRE		TALKING ABOU	
3	Babs	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Big Name	2	EMOJI	CLAPPING HAN		TALKING ABOU	
4	Babs	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	4 fire emojis	0	EMOJI	FIRE		TALKING ABOU	
5	BackRoad Gee	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE		2	EMOJI	SPARKLES		TALKING ABOU	
6	Cheyii	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Bad man.	10	EMOJI	SMILING FACE \		PERSONAL FEEL	
7	playell (artiste)	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	I feel you my br	5	EMOJI	FACE WITH TEA		PERSONAL FEEL	
8	Your Guy curat	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Prrrkti	0	EMOJI	FACE WITH TEA		PERSONAL FEEL	
9	$ka¥	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	UNKNOWN	let's my man be	4	EMOJI	OTHER (angry f		PERSONAL FEEL	
10	Anti-social	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	UNKNOWN	Fire right here (	7	EMOJI	FIRE		TALKING ABOU	
11	MARYJANE	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Do we still have	17	EMOJI	FIRE		TALKING ABOU	
12	Chinonso	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	UNKNOWN	UNKNOWN	4 sparkles emoj	0	EMOJI	SPARKLES		TALKING ABOU	
13	OverWise	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	UK	UNKNOWN	Your guilty, girl '	0	EMOJI	SMILING FACE \		TALKING ABOU	
14	MARHZ	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Drop the link Ge	4	EMOJI	FACE WITH TEA		TALKING ABOU	
15	MARHZ	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Drop the link Ge	4	EMOJI	RED HEART		TALKING ABOU	
16	MARHZ	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	Drop the link Ge	3	EMOJI	CLAPPING HAN		TALKING ABOU	
17	joey	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	UNKNOWN	UNKNOWN	we need to wor	0	EMOJI	OTHER Face wit		TALKING ABOU	
18		BACKROAD GEE	JANUARY 2023	YOUNG ADULT	UNKNOWN	UNKNOWN	Blessed	1	EMOJI	HAND WITH INI		TALKING ABOU	
20	BackRoad Gee	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	I want to do a j	7	EMOJI	OTHER Raising I		TALKING ABOU	
21	BackRoad Gee	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	AFRICA	MALE	I want to do a j	8	EMOJI	THINKING FACE		TALKING ABOU	
22	Wusu Sunday	BACKROAD GEE	JANUARY 2023	YOUNG ADULT	UNKNOWN	UNKNOWN	Jhus or NSG	3	EMOJI	RED HEART		TALKING ABOU	
23	Samantha Fox	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UK	FEMALE	Attending These	5	EMOJI	OTHER beating		TALKING ABOU	
24	Samantha Fox	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UK	FEMALE	Attending These	5	EMOJI	OTHER sparklin		TALKING ABOU	
25	Samantha Fox	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UK	FEMALE	Attending These	12	EMOJI	THUMBS UP		TALKING ABOU	
26	Samantha Fox	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UK	FEMALE	Let's go for 202	5	EMOJI	RED HEART		ADDRESSING FA	
27	Samantha Fox	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UK	FEMALE		0	EMOJI	RED HEART		ADDRESSING FA	
28	@Fruehstueck1	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UNKNOWN	UNKNOWN	WE GOT THIS;-)	3	EMOTICON		HAPPY FACE	PERSONAL FEEL	
29	The Ginger Dr W	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UNKNOWN	UNKNOWN	Link is broken, S	4	EMOJI	OTHER begging		OTHER link that	
30	Samantha Fox	SAMANTHA FO	JANUARY 2023	MATURE ADUL	UK	FEMALE	OMG not sure v	14	EMOJI	RED HEART		ADDRESSING FA	

Figure 1. Screenshot of the dataset

Attention was also paid to the interactions in the posts, in that otherwise emoji might be difficult to interpret due to the crucial role context plays in their understanding (Zappavigna and Logi 2024). The data were coded independently by the two authors of the study. When discrepancies arose, particularly in the analysis of the pragmatic functions of emoji, the examples were reanalysed by both raters until full agreement was reached. Further information is provided in Section 5.6.

5. Results

5.1. Contexts and topics

Addressing the topics discussed in the posts is of relevance in that they undoubtedly have a bearing on the type of emoji used (Zappavigna 2012; Zappavigna and Logi 2024; Yus 2022, 2025). Emoji usage is topic-sensitive and generally responds to the posters' engagement (Zhou and Ai 2022; Yus 2025: 379-428). This explains why, when coding our data, the topic in question was one of the fields considered. Each token was classified under one particular topic which covered a wide range of subjects, including music, personal anecdotes and events in one's life, feelings and emotions, celebrations (parties, birthdays, Halloween, Christmas,

New Year's Eve), information on and reactions to shows, programs, interviews, records, songs and videogames, sports (mainly football), social and political issues, as well as general requests for action and posts directed to the artists' fans and followers.

Some differences are observed between the two groups of posters in this regard. The young adults seem to be more sensitive to social issues, such as politics, social inequality, housing, lack of freedom in certain African countries, and general working conditions. Thus, in (1), BackRoad Gee encourages his fans to follow their dreams, while in (2), one of his followers demands the liberation of a political prisoner in Nigeria. By contrast, in the mature adult group, the focus tends to be more on social conventions, such as greetings, thanking, complimenting and celebrations, as in (3).

(1) A wise man once told me chase your dream don't let your dream chase you 💯. (BRG, December 2022)[5]

(2) 🔒 him (BRG, December 2022)

(3) happy birthday mr. collins 🥳🎂🎉🌟🌟🌟 it was a privilege to see you and the lads in toronto not long ago 🥂🇬🇧 be well & enjoy ❤️ @genesis_band (PC, January 2023)

Overall, emoji are used in higher numbers for light-hearted topics, such as social conventions and the expression of emotions. It is in the context of these situations that the posters show their full range of emoji. This finding is consistent with previous studies (Herring and Dainas 2017; Prada et al. 2018; Jaeger et al. 2019; López Rúa 2021).

5.2. Tweet length

The number of words in the selected posts ranges from 0 to a maximum of 50, with a mean length of 10 words per tweet. Those containing 4 or 5 words are the most frequent, some 107 tweets in total (17.8%). These are followed by tweets containing 2 words (45 tweets, 7.5%), and 3 words (36 tweets, 6%). In 146 cases (24.3%), emoji are used alone, that is, with no accompanying words, and thus function independently (Danesi 2016; Khandekar et al. 2019; Yus 2025).

(4) BackRoad Gee
I've been down I've been working hard They can't stop my blessings
Pay Harvey
🖤 (BRG, February 2023)

In (4), BackRoad Gee expresses he has been lately facing some difficulties, but he has made an effort to overcome them. One of his followers, Pay Harvey, responds simply with the heart emoji, thus showing solidarity with him.

When comparing the samples of young and mature adults, we observed a clear tendency for the latter to use longer posts. Out of 54 posts containing 30 words or more, just 22 (40.7%) are by young adults, with the remaining 32 (59.3%) by the older group. Conversely, among the 74 posts consisting of only one or two words, 43 (58.1%) were by young adults. It appears, then, that younger users tend to replicate the brief turns of their regular spoken exchanges in their posts, which may account for the brevity of their tweets, a finding that is supported by Nguyen et al. (2013), among others.

5.3. Frequency

The proportion of posts containing emoji across the entire initial sample is 4 out of 10, that is, a total of 603 posts out of the initial 1,500. This proportion (40.2%) can be seen as relatively high and it is higher than previous estimates, which suggest that emoji appear in approximately 20% of tweets for English (e.g., Roele, Ward and van Duijn 2020; *Emojipedia* n.d.), although proportions vary depending on the sample and context. It should be borne in mind that there are individuals who are very fond of emoji, and who consequently use them very often, whereas other posters may not use them at all in their everyday communication. Thus, as explained above (see Section 4 on method), Enny, Erwyn and Samantha Fox seem to be more fond of including emoji in their posts while Elton John, Phil Collins and Backroad Gee are more restrictive. However, no differences are identified overall between the two age groups in this respect. The number of emoji in particular posts ranges from 1 (ex. 5) to 66 (ex. 6).

(5) See ya 👋🏾 (ETJ, December 2022)

(6) ... RIP.... Burt Bacharach..... Spring is in the air..... Happy Friday 2023 ..... 💖💓💕💚🖤💖💗💜💋😁🥰🤩⭐💫❤️💙💖🌈💙💋⭐💖💓🌈☀️🌸🤎🪷💚🥰😁🧡❤️💜✨💥⭐❤️💖🤟🖤🌸🥰🌞💙💧💚🥰😁🧡❤️💜✨💥⭐💖💓🌈☀️🌸🤎🪷💚🥰😁🧡 (PC, February 2023)

A total of 228, that is, 37.8% of the posts contain only 1 emoji, which thus seems to be the preferred option. Meanwhile 97, that is, 16.1%, include 2, and 88 (14.6%) contain 3. Notably only 5.6% of the posts feature more than 15 emoji. Table 2 below shows further details.

[5] After each example, the general Twitter/X account from which the example has been extracted is recorded, along with the month and year when the post was compiled. This allows anyone to retrieve all these examples for further investigation, and also facilitates replication of the study. The initials BRG, PC, SF, ETJ, EN and BE are used to indicate BackRoad Gee, Phil Collins, Samantha Fox, Elton John, Enny, and Berwyn, respectively.

Table 2. Frequency of emoji use per tweet

Frequency of emoji use per tweet	N	%
1 emoji	228	37.8
2 emoji	97	16.1
3 emoji	88	14.6
4 emoji	35	5.8
5 emoji	31	5.1
6 emoji	50	8.3
8 emoji	6	0.9
9 emoji	2	0.3
10 emoji	6	1
12 emoji	14	2.3
15 emoji	12	2
20 emoji	20	3.3
23 emoji	1	0.2
24 emoji	1	0.2
33 emoji	1	0.2
54 emoji	10	1.7
67 emoji	1	0.2

In addition, there is a tendency for the older adults in the study to use more emoji within the same post. For example, among the 74 posts containing 8 or more emoji, 63 (85.1%) are from mature adults. A similar trend is observed in posts containing 1 or 2 emoji (325 in total): 205 tweets (63.1%) are from young adults, while the remaining 120 (36.9%) are from mature users. More details can be found in Table 3.

Table 3. Emoji frequency within the same post according to age group: Statistical differences

Frequency of emoji use per tweet	Young adults		Mature adults		χ^2	p-value	LL
	N	%	N	%			
1 emoji	152	49.8	76	25.5	36.93	0.000*	24.09*
2 emoji	53	17.4	44	14.8	0.58	0.446	0.64
3 emoji	39	12.8	49	16.4	1.34	0.278	1.38
4 emoji	12	3.9	23	7.7	3.29	0.070	3.78
5 emoji	6	2	25	8.4	11.46	0.001*	12.96*
6 emoji	31	10.2	19	6.4	2.37	0.124	2.64
More than 8 emoji	12	3.9	56	18.8	53.13	0.001*	31.92*

An analysis of emoji frequency per tweet according to age group reveals statistically significant differences in certain categories (see Table 3). A Chi-square test of independence (with Yates' continuity correction) was applied to each emoji frequency category to assess whether the distribution of emoji within the same post differed significantly between young and mature adults. The results show that the use of exactly 1 emoji is strongly associated with young adults, who produced a significantly greater proportion of 1-emoji posts than expected (χ^2 (1) = 36.93, $p < .0001$). In contrast, posts containing five emojis were significantly more common among mature adults (χ^2 (1) = 11.46, $p = .0001$). For other individual frequency categories, such as 2, 3, or 4 emoji, no statistically significant differences were found between age groups ($p > .01$). This suggests that these emoji usage patterns are more evenly distributed across age.

Due to the very low frequencies observed in the higher-end categories (e.g., 8, 9, 10, 12, 15, and more than 15 emojis) and the fact that some values were non-existent in one of the groups of subjects considered, statistical testing was not appropriate in those cases. Instead, these were grouped into a broader "8 or more emoji" category. This aggregate value showed a strong skew toward mature adults. As explained above, of the 74 tweets containing 8 or more emojis, 85.1% (n = 63) were from mature users, suggesting a notable age-related pattern in high-density emoji use.

Moreover, the Chi-square findings were supported by Log-Likelihood values computed according to the method described by Rayson and Garside (2000). In all cases, these findings point to a significant difference according to age in emoji frequency per tweet, with younger users favouring minimalist use (especially single emojis), and older users more likely to use denser emoji expressions.

The previous findings cannot be regarded as conclusive, but they are consistent with previous studies. Thus, some scholars (Bezirgan and Kaya 2019, 557-558; Weiβ et al. 2020) have shown that emoji frequency varies across generations, with Millennials and Generation Z using them more frequently than Baby Boomers. However, other studies (Hougaard and Ratje 2018, 789; Koch et al. 2022) have not found substantial age-related differences in emoji use based on this factor alone.

In addition to the previous tendency, we also observe in our data that among younger demographics, there is a noticeable shift toward using more dynamic visual elements, such as GIFs, memes, and stickers, which offer greater expressive range and cultural relevance. This trend is supported by research (Zhou et al. 2017; Konrad et al. 2020; Yus 2025, among others) showing that younger users find these formats more effective for conveying emotions and nuanced reactions in digital communication. Furthermore, there is no real limit to the number or variety of emoji that can appear together in a single post, allowing users to convey a wide range of emotions simultaneously.

(7) Congratulations, Phil Collins! Well deserved! ❤️👏🏻👏🏻👏🏻👏🏻🏅🎶🎤🎹 (PC, February 2020)

5.4. Emoji types and variety

A total of 162 different emoji were identified in the data, based on the Unicode standard emoji groupings. According to the Unicode Consortium (2022), each emoji is assigned a specific Unicode code point, which ensures consistent display across platforms. Various types of faces, hands and fingers, hearts, stars, fire and musical notes were the most prolific. We also identified emoji related to celebrations, musical instruments, films, flags, animals, flowers, arrows, rainbows, suns, trophies and medals. Most of them can be regarded as positive, as they are associated with emotions, attitudes, celebrations and concepts that denote or express something favourable for the posters. Negative emoji were restricted to a few faces (crying, grinning, yawning), hands and fingers, broken hearts, and together represent only 3% of the total, these found in only 18 posts with emoji.

(8) let's my man be 😡, don't bother answer baby gimme dat grr, i love it. (BRG, January 2023)

(9) Link is broken, Sam. 🥺🥺 (SF, January 2023)

Our results regarding type and variety are consistent with previous findings in the literature (Danesi 2016; Bai et al. 2019; Seargeant 2019; López Rúa 2021; Marko 2022). Table 4 below provides overviews of the types, varieties and frequencies in terms of tokens of the emoji identified in the sample.

Table 4. Emoji types/variety considered

Categories	Examples	N (types)	%
Faces: tears of joy, smiling, pensive, begging, winking, grinning (with stars, smile, sweat), sweating, with sunglasses, with turning eyes, yawning, showing surprise, (loudly) crying, angry, flushed, showing triumph, cold, full moon, neutral, rabbit	😂😡🤣😍💀🤫😔😢🥱🥺🥰🙃🤯😁🥶🤠🤔😤	51	31.5
Celebrations: Halloween, Christmas, New Year, Santa, balloon, bottle of champagne, glasses clinking, serpentine, birthday cake, party popper, wrapped gift, fireworks, confetti clipart, firecrackers, crown, bunch of flowers, first place medal, trophy	🎉🥂🍾🎈🎅🎄🎁🥳🎂	17	10.5
Hands, arms & fingers: thumbs up, raising hands, fist, folded hands, clapping hands, praying hands, waving hand, palms up together, fingers point down, flexed biceps/arm	🙌🤳✋💪🫶🤞🙏👋👊👇	12	7.4
Hearts: red, black, blue, green, yellow, white, broken, double hearts, on fire, sparkling	❤️🤍💕❤️💖💞❣️💚🧡❤️💜💔	11	6.8
Music & films: musical notes, sheet music, drums, camera, piano, keyboard, record, radio, microphone	🎶🎸🎥📻🎹🎼	10	6.2
Flags: UK, US, Canadian, Nigerian, Argentinian, Trinidad, Gambia, Mexican, trans	🇬🇧🇺🇸🇨🇦🇮🇹🏳️‍⚧️	9	5.5
Flowers, plants and trees: 4-leaf clover, rose, maple leaf, lotus, sunflower, hibiscus, Christmas tree	🌹🌿🌺🌻💮	8	4.9
Stars: dizzy, glowing, sparkles, star struck	💥✨🌟☀️	5	3.1
Animals: deer, dove, fox, rabbit, butterfly	🕊️🦋🦊	5	3.1
Other: fire, 100%, rocket, rainbow, tennis racket, eyes, lips kissing, lock, blue cap, man with probing cane, horns, double exclamation marks, pushpin, checkmark, ticket.	👀🚀🚶⬇️💋 🌈🔨🔒	34	21
Total		162	100

In terms of emoji types, those featuring faces, hearts, hands and fingers, and celebrations are by far the most frequent. Faces and celebrations represent 31.5% and 10.5% of the total, respectively. These are followed by hands and fingers (7.4%) and hearts (6.8%). A total of 10 emoji (6.2%) referring to music are recorded, while those relating to flags and flowers are limited to 5.5% and 4.9%, respectively. The remaining ones (stars, animals, crown, the 100% symbol, tennis racket, rocket, rainbow, etc.) are more marginal, except for the fire emoji, which occurs 39 times.

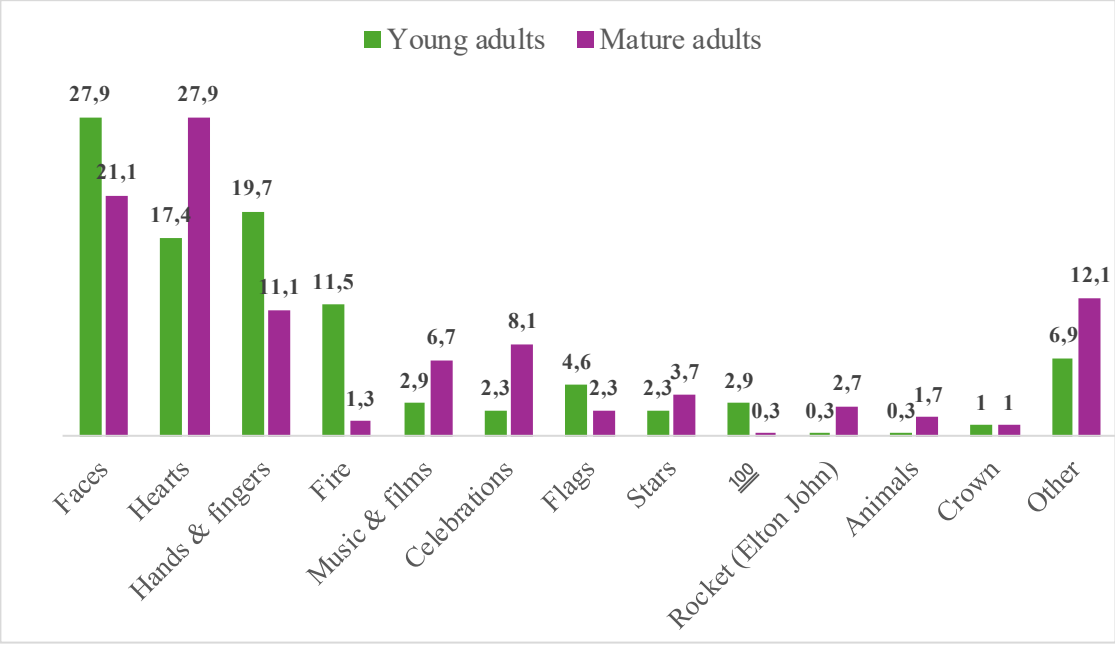
When considering the frequency of specific emoji according to age group, the young adults of our study show a preference for emoji representing faces, hands and fingers, fire, flags and 100% emoji. By contrast, mature adults are more likely to use hearts, music and films, celebrations and animals (cf. Table 5 and Figure 2), as can be seen in the following examples.

(10) Do we still have to beg for this one Also. U and juju J in a track. 🔥🔥🔥 (BRG, January 2023)
(11) On our way to Sunset Marquis to see photos at Morrison Gallery 🥂🎉🎶🌹 (ETJ, November 2022)

Table 5. Emoji frequency according to age group

Categories	Young adults		Mature adults		Total
	N	%	N	%	
Faces	85	27.9	63	21.1	148
Hearts	53	17.4	83	27.9	136
Hands & fingers	60	19.7	33	11.1	93
Fire	35	11.5	4	1.3	39
Music & films	9	2.9	20	6.7	29
Celebrations	7	2.3	24	8.1	31
Flags	14	4.6	7	2.3	21
Stars	7	2.3	11	3.7	18
100%	9	2.9	1	0.3	10
Rocket (Elton John)	1	0.3	8	2.7	9
Animals	1	0.3	5	1.7	6
Crown	3	1	3	1	6
Other	21	6.9	36	12.1	57
Total	305	100	298	100	603

Figure 2. Emoji frequency according to age group



When comparing the figures obtained for each age group, we find that the differences are statistically significant in the case of the 'Fire' emoji, where the Chi-square (χ^2) value is 23.94 with $p<0.0001$. For most of the other emoji categories, the p-value obtained is above 0.1, indicating that these differences are not statistically significant between age groups. However, the categories 'Hands & Fingers', 'Music & Films', and

'Celebrations' show statistically significant differences at a significance level of p< 0.05. Specifically, the latter two are more frequent among mature adults, while the former, that is, 'Hands & Fingers' is more prevalent among younger adults. Given that the counts for some categories were low, Fisher's Exact Test was also performed, and the results confirmed these general findings, highlighting significant differences within the same categories. Emoji categories with fewer than 10 tokens in total (e.g., 'Rocket', 'Animals', 'Crown') were excluded from the statistical comparison due to low frequency, which limits the reliability of inferential testing.

Table 6. Statistical differences in emoji frequency according to age group

Categories	Young adults	Mature adults	χ^2	p-value	Fisher's p-value	LL
Faces	85	63	3.33	0.1780	0.1723	2.79
Hearts	53	83	8.88	0.0003	0.0003	7.39
Hands & fingers	60	33	7.90	0.0137	0.0115	7.34
Fire	35	4	23.94	0.0001*	0.0001	27.56
Music & films	9	20	3.87	0.0290	0.0211	4.54
Celebrations	7	24	9.1	0.0011	0.0006	10.26
Flags	14	7	1.63	0.2665	0.2644	2.22
Stars	7	11	0.59	0.3527	0.3370	0.99

In addition to Chi-square and Fisher's Exact Test, Log-Likelihood (LL) values were, as before, calculated to provide further statistical support for the observed differences in emoji usage between age groups (Rayson and Garside 2000). The Log-Likelihood results confirmed statistically significant variation in the use of specific emoji categories, particularly at the p < 0.01 level. The category 'Fire' showed the highest LL value (LL = 27.56), indicating a strong association with young adults. Statistically significant differences were also found in the use of 'Hearts' (LL = 7.39) and 'Hands & Fingers' (LL = 7.34), with the former more commonly used by mature adults and the latter by younger ones. While the category 'Music & Films' yielded an LL score of 4.54, this result is statistically significant only at the p < 0.05 level, suggesting a moderate preference among mature users. These findings reinforce the statistical differences identified through Chi-square and Fisher's Exact Test, and underscore the generational variation in emoji preferences observed in the corpus.

5.5. Emoji position in the clause

Emoji can be found at the beginning, middle or end of tweets, and can also stand alone, thus being equivalent to a turn. However, end position is by far the most common, which aligns with findings reported elsewhere (Dressner and Herring 2010, 2014; Evans 2017; Na'aman, Provenza and Montoya 2017; Zhou et al. 2017; Al Rashdi 2018; Dürscheid 2021; Wiese and Labrenz 2021).

(12) ⭐⭐⭐🇦🇷😘🤪 Masters of the universe. Legends. (PC, February 2023). **Initial**.

(13) I'm loving all the videos 💃🕺 u lot proper understand the assignment ❤️🙌🏽 (BRG, November 2021). **Middle/Final**.

(14) I wish I could go 😭😭😭😭😭❤️(SF, January 2022). **Final**.

(15) 👍🏽🎉🙏🏽❤️🎾🇬🇧(EN, February 2023). **Standalone**.

Contrary to what might be expected, the position of the emoji within the clause is not trivial. Thus, whereas the same emoji can appear in initial and final position, its meaning shifts depending on its position, as illustrated in (16) and (17). In this respect, a comparison can be drawn between emoji and other grammatical categories such as vocatives where their position within the utterance affects their pragmatic force (Clancy 2015; Palacios Martínez 2018).

(16) ❤️❤️❤️❤️ I love you Phil (PC, January 2023)

(17) What a Gig ❤️ (SF, December 2022)

In (16) the emoji of the red heart can be interpreted as a visual representation of the meaning of the post that follows, hence we can say that it is framing or contextualising the post. By contrast, in (17) the emoji introduces an additional meaning to the previous post, in this case the idea that the gig was indeed fantastic, one which the poster also really enjoyed.

When considering the position of emoji according to age group, major differences are observed, both in final position and when they are attested on their own. In the case of final position, young adults show a higher proportion (75.4%) than mature adults (60.4%). The opposite is true for the latter, with mature adults using these 'standalone' emoji more often than young adults (32.5% versus 15.1%). The differences in both cases are statistically significant at the p< 0.0001 level, with Chi-square (χ^2) values of 14.92 for final position and 24.47 for emojis standing on their own (see Table 7 and Figures 3 and 4). As before, Log-Likelihood (LL) values were calculated following the method described by Rayson and Garside (2000), to provide additional support for the Chi-square findings. The results were consistent with the earlier tests and confirmed the observed differences in emoji position by age group.

Table 7. Statistical differences in emoji position according to age group

Categories	Young adults (%)		Mature adults (%)		χ^2	p-value	LL
	N	%	N	%			
Initial	12	3.9	13	4.4	0.0	0.9527	0.07
Middle	17	5.6	8	2.7	2.48	0.1152	3.11
Final	230	75.4	180	60.4	14.92	0.0001*	5.01
On its own	46	15.1	97	32.5	24.47	0.0000*	19.80

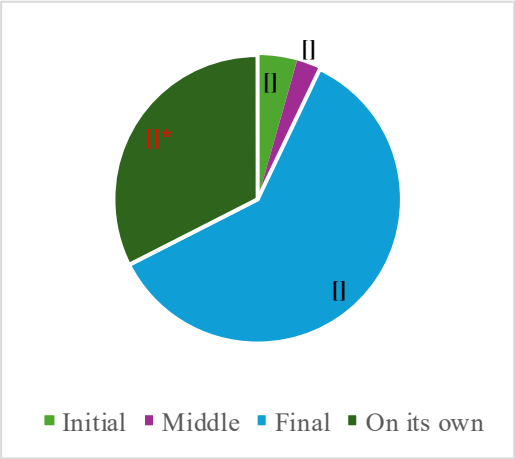


Figure 3. Emoji position (young adults)

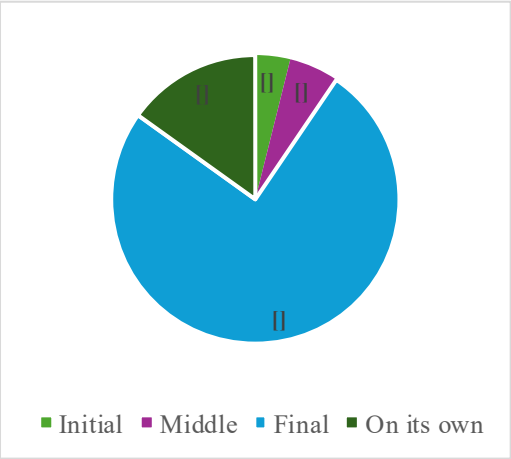


Figure 4: Emoji position (mature adults)

5.6. Emoji pragmatic functions

Emoji can be regarded as graphic discourse markers (Wiese and Labrenz 2021), conveying different (and sometimes overlapping) pragmatic functions that are highly context sensitive and often polysemous (Zappavigna and Logi 2024). Building on the existing literature, including studies by Traugott (2010), Cramer, de Juan and Tetreault (2016), Herring and Dainas (2017, 2020), Dainas and Herring (2021), Zappavigna and Logi (2021, 2024), Herring and Ge-Stadnyk (2024), and Yus (2022, 2025), we propose a pragmatic taxonomy, although one that should not be considered totally exhaustive. The multifunctionality and rapid evolution of emoji use mean that the pragmatic roles of these devices continue to develop, influenced by cultural, contextual, and individual factors (Bai et al. 2019; Zappavigna and Logi 2021, 2024). Our analysis distinguishes five broad categories: iconic, subjective, intersubjective, textual/punctuation, and describing or constructing identity. These categories should not be regarded as entirely distinct, as they may at times overlap.

In the *iconic* function, emoji adopt the role of symbols and often substitute for word(s). The *subjective* category, which relates to the expression of the poster's feelings and emotions, includes two main subcategories: (i) expressing emotions; and (ii) intensification. The *intersubjective* function, which focuses on the relationship between the addresser and the addressee, is further divided into four subcategories: (i) expressing rapport; (ii) politeness and face management; (iii) humour and banter; and (iv) irony and criticism. In the *textual* function, emoji behave as punctuation markers, helping to organize discourse not only formally but also in terms of content. Finally, in the category of *constructing* or *describing identity*, emoji serve to both describe and visually construct the poster's identity. These emoji tend to appear in users' profile sections.

Our taxonomy combines elements from previous classifications of the pragmatic functions of emoji, such as that proposed by Dainas and Herring (2021, 10), who identify eleven categories. However, their model is based on interpretations of 46 emoji provided by several groups of Facebook users. This means that their classification is more oriented toward perceived meaning rather than the actual use of emoji in discourse. We also rely on Yus's recent taxonomy (2022, 83-101; 2025, 48-126), as it is highly comprehensive (cf. Section 2.2 on Functions of emoji).

Our own classification is tailored to the aims of this study, which explores the pragmatic use of emoji in music fandom interactions on Twitter/X. It adapts and systematizes insights from both Dainas and Herring's (2021), and Yus's (2022, 2025) models, while it also incorporates elements from Traugott's (2010) framework, particularly her distinction between 'subjective' and 'intersubjective' functions.

As explained in Section 4 (Method), all examples were independently analysed by the two authors. Interrater reliability was assessed using Cohen's Kappa (Landis and Coch 1977). A total of 603 emoji tokens were coded for pragmatic function across the four main categories and their subcategories, excluding the

identity group, which was not included in the count, as it is typically expressed in the posters' profile bios rather than in the sequence of posts. Full agreement was reached in 577 cases (95.7%) whereas disagreements (n = 26) occurred only between the *subjective* and *intersubjective* categories. The resulting Kappa value was 0.93, reflecting almost perfect agreement between coders.

5.6.1. Iconic

Within this category, we group emoji that help make the poster's message more visual, direct, and clear. In such cases, the emoji often replaces one or more words (cf. Yus 2025, 75ff on emoji used to replace verbal elements within a message), a function referred to as a "mention" by Dainas and Herring (2021). Consider the following example:

(18) We lit Dodger Stadium up last night! 🚀✨🚀 (ETJ, November 2022)

Here, a fan of Elton John uses the 'Rocket' emoji as a symbolic reference to the singer, drawing on his iconic song *Rocket Man*. The emoji here functions as a fandom marker. Similarly, countries may be represented through their flags (19), a rubbish bin may stand in for something perceived as low quality, such as music in (20), and abstract concepts like love or freedom can be conveyed through icons such as a heart (21) or an open lock (22). This symbolic use extends to other icons like the sun, the earth, or the rainbow.

(19) Love from Gambia 🇬🇲 (BRG, November 2022)
(20) UK music is 🚮 (BRG, November 2022)
(21) My ❤️ belongs to you (PC, May 2019)
(22) Free him 🔓 (BRG, December 2022)

5.6.2. Subjective

Following Traugott (2010, 30), this category includes emoji that reflect the user's perspective, encompassing the expression of their emotions (sadness, concern, love), beliefs, and attitudes, that is, personal stance. This also subsumes here the functions referred to by Dainas and Herring (2021) as 'reaction' and 'tone modification', or those described by Yus in which emoji add feelings or emotions to the text, either *within* (2025, 69-75), *without* (2025, 92-94), or *beyond* (2025, 100-105; cf. also Section 2.2). In these cases, emoji are often accompanied by exclamations, capital letters, and word lengthening, and very often perform an intensifying function.

(23) your sound is sick! 🔥🔥🔥 (BRG, December 2021)
(24) WE LOVE YOU YOO ❤️🙌🏽 (BRG, November 2021)
(25) Love my girl, sooooo much ❤️😄😄🦊💋 (SF, December 2021)

In (23), for example, the three 'Fire' emoji serve to intensify the emotional force of the message, enhancing the poster's expression of admiration for the artist's music. The presence of three similar emoji, rather than just one, contributes to this intensifying function. Something similar is observed in (24) and (25), where this emotional and heightening value is reinforced by the use of capitals and syllable lengthening, respectively.

5.6.3. Intersubjective

At this level, emoji reflect the addresser's perspective by conveying different meanings such as rapport, solidarity, complimenting, apologising, making a request, drawing attention, and expressing tones or expressions of humour, irony, criticism or sarcasm Therefore, a 'relational' stance between user/addresser and addressee is established. This category is equivalent to what Dainas and Herring (2021) refer to as 'riff', and is aligned with Traugott's (2010) notion of 'intersubjectivity'. Yus also describes similar functions in his threefold classification of emoji, e.g., *joking* (2025, 63-65), and *irony* (2025, 65-68). Intersubjective functions of emoji are illustrated in the examples below.

(26) African Army Vs US Army getting 😂#Sturdy #UnderAttack (BRG, January 2023)
(27) Bruhhh even got the same lips I cba😂😂😂😭😭😭😭😭 (BRG, March 2022)

In (26), the poster humorously compares a supposed "African Army" to the "American Army", the latter being playfully depicted as "under attack." This conveys a light-hearted tone and a humorous rivalry between the two armies. Finally, in (27), a fan of BackRoad Gee responds ironically to a previous tweet where the rapper claimed to look like a famous Premier League footballer, using sarcasm to humorously challenge such a self-comparison.

5.6.4. Textual/Punctuation

When emoji perform a *textual* function, they may help to organise, structure, or clarify the flow of written communication (Wiese and Labrenz 2021; Zappavigna and Logi 2021, 2024). This aligns with the *emoji beyond (the text)* category identified by Yus, as it includes roles "which relate to the whole act of communication" (2025, 95). Used in this sense emoji can act like punctuation or visual markers, separating different sections of a message, guiding the reader through the text, and highlighting certain elements. By providing such visual cues, emoji enhance readability and help to convey the intended structure of the message. Thus, in (28), the 'Kiss Mark' emoji signals the end of a turn, while in (29) the 'Raising Hands' and the 'Thinking Face' emoji function as traditional punctuation marks.

(28) I will not ever NOT listen to PC, 💋 #loveandrespect (PC, September 2021)
(29) I want to do a joint EP 🙌🏽 which artist do you think will be suitable 🤔 (BRG, January 2023)

5.6.5. Describing identity

Although this has received little attention in the literature with a few exceptions (Ge 2019), emoji are very often used to reflect aspects of a poster's identity, such as their hobbies, occupation, origin, personality traits, interests, preferences, etc. These emoji, while providing personal information that can be seen in the poster's profile, may also play an iconic function and could therefore be regarded as an extension of the iconic function discussed above (Section 5.6.1).

(30) MARYJANE 🍁 PAPI@mkhybrid_ART PRODUCTIVE STONER🍁* TO THY OWN SELF BE TRUE/ FIRM&STRONG| 💨 #MARCOPOLO #CHUKWUEBUKA OUTSIDER🦍 UNRULY 🤘 (BRG, January 2023)

In (30), for example, the poster's chosen name, *MaryJane*, is a common slang term for marijuana, represented here with a 'Leaf' emoji (🍁) to reinforce the association. This is followed by *PAPI* in capitals, a term of endearment, suggesting familiarity. The name is completed by an email handle and a self-description, *ART PRODUCTIVE STONER*, which implies that the person is highly productive in the art world. The final emoji (🍁) further strengthens this aspect of their personal identity.

Table 8 below sets out the general frequency of each of the pragmatic functions described above. As already mentioned, the identity dimension is excluded, since this information is typically not present in the posts themselves but, rather, is found in users' profiles.

Table 8. Emoji pragmatic functions

Pragmatic functions	N	%
Iconic	95	15.8
Subjective Expressing love, happiness, sadness, grief, embarrassment, concern Intensification *Subtotal*	 219 28 247	 36.3 4.6 40.9
Intersubjective Expressing rapport, solidarity, complimenting Politeness and face management: apologising, making a request, drawing attention, mitigating, expressing politeness Humour & banter Irony/sarcasm/criticism *Subtotal*	 164 48 22 17 251	 27.3 7.9 3.6 2.8 41.6
Textual/punctuation	10	1.7
TOTAL	603	100

It can sometimes be difficult to draw strict boundaries between the various categories of pragmatic functions considered, in that some examples may fall under two or even three different types. This means that emoji very often are multifunctional. However, the data here indicate that emoji in our sample fulfil mainly subjective and intersubjective functions. Thus, conveying personal feelings, emotions and attitudes (subjective) account for a total of 40.9% uses of emoji, while those expressing rapport, solidarity, humour and irony/sarcasm (intersubjective) represent 41.6%. These two categories together comprise over four quarters of the total (82.5%), followed by the iconic function (ca. 16%). In turn, the textual function, according to which emoji serve specifically to organise discourse, is not very relevant, with only 10 tokens (1.7%) in our sample.

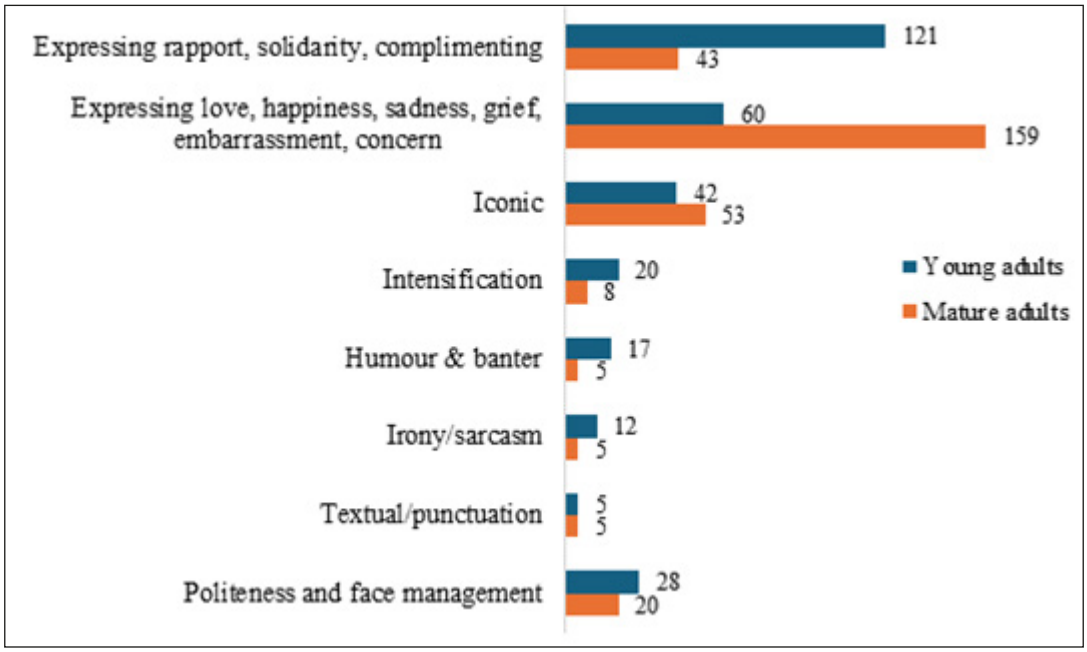
When considering the pragmatic functions of emoji according to age group, some differences are observed. Mature adults seem to favour the use of emoji to express personal feelings and attitudes, with a total of 54.16%, compared to 22.5% in the case of young adults. In contrast, the latter use these graphicons more often to express rapport and solidarity, politeness, to draw attention and to convey humour, irony, or sarcasm (58.4% vs. 24.5% for mature adults). The differences in the use of subjective and intersubjective functions are statistically significant. The Chi-square (χ^2) value for intersubjective functions is 69.71, with a p-value < 0.0001, while for subjective functions it is 54.16, also with a p-value < 0.0001. The textual/punctuation and iconic functions show similar patterns in the two groups, with no statistically significant differences observed. As before, Log-Likelihood values were also calculated and confirmed the significant differences identified between the two age groups (see Table 9 and Figure 5).

Table 9. Emoji pragmatic functions according to age group

Pragmatic functions	Young adults		Mature adults		χ^2	p-value	LL
	N	%	N	%			
Iconic	42	13.8	53	17.8	1.540	0.214	1.54
Subjective Expressing love, happiness, sadness, grief, embarrassment, concern Intensification *Subtotal*	 60 20 80	 19.7 6.5 26.2	 159 8 167	 53.3 2.7 56	54.16	0.0001*	33.3

Pragmatic functions	Young adults		Mature adults		χ^2	p-value	LL
	N	%	N	%			
Intersubjective							
Expressing rapport, solidarity, complimenting	121	39.7	43	14.4			
Politeness and face management:	28	9.2	20	6.7	69.71	0.0001*	42.9
apologising, making a request, drawing	17	5.6	5	1.7			
attention, mitigating, expressing	12	3.9	5	1.7			
politeness	178	58.4	73	24.5			
Humour & banter							
Irony/sarcasm/criticism							
Subtotal							
Textual/punctuation	5	1.6	5	1.7	0	1.0000	0.0

Figure 5. Pragmatic functions according to age group



6. Summary and conclusions

Although the present study does not aim to be conclusive, we believe that age is an important variable to consider, not only in offline but also in online communication and digital genres. This is particularly true for the use and function of emoji in Twitter/X discourse, especially in the domain of music fandom.

Until now, studies addressing the role of emoji in Twitter discourse according to age have focused on five main areas: frequency of use, interfaces for emoji-based communication, familiarity with emoji use, conveyed meanings, and age-based differences in the use and interpretation of specific emoji.

Our study expands on this existing body of work by examining additional factors, including differences in emoji use based on topic, tweet length, and the number of emoji used in a single post. Furthermore, we contribute new insights into the use of specific emoji categories, such as 'Fire', 'Hands & Fingers', 'Music & Films', and 'Celebrations', as well as the position of emoji within tweets, with particular attention to emoji that stand alone. Finally, we propose a new integrative pragmatic framework in order to account for the different functions of emoji across age groups, highlighting notable differences between the two participant samples examined. The following paragraphs elaborate on all these aspects.

The young and mature adults in this study partly differ in the topics they discuss, even in cases in the present sample, where all six posters are British musicians, and thus music is expected to be the central subject matter for all of them. The young adults of the study seem to be more focused on social and political issues, while more mature users tend to engage with topics related to social conventions and celebrations. As mentioned above, the ethnicity, origin of the posters and their personal interests may also have a bearing on this.

Regarding tweet length, the participating mature adults tend to write longer posts, while younger ones prefer brevity, possibly mirroring the brief turns they commonly use in natural conversation. This aligns with previous findings in the literature (Nguyen et al. 2013). While there is no limit to the number of emoji that can appear in a message, most posts in our dataset contain just 1 emoji, with only 10.9% including 10 or more.

There is a tendency for the mature adults of our study to use more emoji in a single post. A total of 162 different emoji were recorded, with faces, hands, hearts, and music-related graphicons being the most frequent and diverse in nature, confirming the findings of previous studies that report greater emoji density and functional variety among older users (Prada et al. 2018).

The vast majority of emoji in our data are highly context-sensitive, representing positive feelings, attitudes, and circumstances. Statistically significant differences between the two groups were observed only for the 'Fire' emoji, which is more frequently used in the exchanges of young adults. To a lower degree, notable differences were identified for the categories 'Hands & Fingers', 'Music & Films', and 'Celebrations'. It is worth noting that 'Music & Films' and 'Celebrations' are used more frequently by the participating mature adults, while 'Hands & Fingers' is more common among the younger adults of our sample.

Final position is by far the most common placement for emoji in both groups, and indeed is the preferred option for the younger group. Mature adults seem to favour 'standalone' emoji as responses to previous messages. In both cases such differences are statistically significant.

The same applies to the pragmatic functions of emoji, which in most cases serve as graphic discourse markers. For both groups, emoji express subjective, intersubjective, iconic, and textual functions, albeit with some variations. While subjective functions are more prominent among the mature adults of our study, intersubjective are more common with younger users, these differences being statistically significant, in keeping with previous findings (Dressner and Herring 2010, 2014; Danesi 2016; Zhou et al. 2017; Prada et al. 2018; Wiese and Labrenz 2021).

7. Limitations and suggestions for further research

From a methodological point of view, the age variable is difficult to control completely with data from social media platforms such as Twitter/X since users often do not disclose this information. The use of a combination of strategies including manual annotation of profiles, predictive modelling based on linguistic features, and the identification of self-disclosed age references could be a possible solution to this challenge although it is not without potential limitations.

Ideally, our sample should be expanded, allowing for a larger body of data to verify the findings. An additional problem is that, for adolescents and teenagers, Twitter/X is not their preferred social media. A *Pew Research Center* survey published in December 2023 revealed that the number of Twitter/X users had decreased from previous years, in favour of other social media such as YouTube, TikTok, Snapchat and Instagram.

Although emoji have been widely studied, especially through surveys and interviews, further research is needed to explore how a wider range of contextual, demographic, and pragmatic factors shape their use, function, and interpretation. There is also a need for more studies that compare emoji across a variety of social media platforms to determine whether their uses and functions are similar or different in these contexts. In addition, cross-linguistic studies merit further attention.

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