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A Multimodal Social Semiotic Analysis of Emoji's Use with Reference to COVID-19

Marwah Firas Abdullah Al-Rawe
Hazim Hakkush AlDilaimy
hazimaldilaimy@uoa.edu.iq
Department of English, Al-Maarif University College - Iraq
Firas Abdullah HammoodAlqayssi
firas_alqayssi@uoanbar.edu.iq
College of Pharmacy, University of Anbar - Iraq

Abstract

Emojis pose significant challenges for researchers in the various platforms of social media. Their meanings are sometimes far-fetched and difficult to grasp. In spite of their assumed universality, the sense of an emoji may change from one language to another and from culture to culture. This paper investigates the use of emojis in everyday language via a multimodal social-semiotic analysis investigating the collaboration of different semiotic modes with the context of situation to generate the intended meaning out of the multimodal features of emojis. It tries to adopt aquantitative research methodology relying on two questionnaires to understand the meaning potentials of these significant factors of social media.60 participants have been collected, 30 students (15 male and 15 female students) and 30 academics (15 male and 15 female academics) of Al-Maarif University College. The test is designed to find out the extent of awareness and recognition between students and academics in terms of meanings of emojis during Covid-19 pandemic and whether or not misunderstanding of their meanings may affect their intended messages to achieve successful communication. The study tries to find out any possible variations between the two parties understudy. The questionnairesare designed to find out how the participants apply their knowledge of emoji meanings in their communication. The Findings have revealed that there are many variations in the way emojis are handled by each group and an increase in using covid-19 special emojis other than the rest of emojis as a context-based usage .

Key words: Emojis, Social Media, Multimodal Social Semiotics, Meta discourse factors, Emojitopia, Context-based.

تحليل سيميائي اجتماعي متعدد الوسائط لاستخدام الرموز التعبيرية (Emoji) بالإشارة إلى جائحة كوفيد-١٩

مروة فراس عبد الله الراوي
حازم حكوش الدليمي
قسم اللغة الإنجليزية، كلية المعارف الجامعة – العراق
فراس عبد الله حمود القيسي
كلية الصيدلة، جامعة الأنبار – العراق
firas_alqayssi@uoanbar.edu.iq

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الملخص
تمثل الرموز التعبيرية (Emoji) تحدياتٍ كبيرة للباحثين في مختلف منصات التواصل الاجتماعي، إذ تكون معانيها في بعض الأحيان بعيدة عن التفسير المباشر ويصعب إدراكها. وعلى الرغم من افتراض عالميتها، فإن دلالة الرمز التعبيري قد تختلف من لغة إلى أخرى ومن ثقافة إلى أخرى. وتبحث هذه الدراسة في استخدام الرموز التعبيرية في اللغة اليومية من خلال تحليل سيميائي اجتماعي متعدد الوسائط، يدرس تفاعل الأنماط السيميائية المختلفة مع سياق الموقف لإنتاج المعنى المقصود انطلاقًا من الخصائص متعددة الوسائط التي تتميز بها الرموز التعبيرية. وتتبنى الدراسة منهجًا بحثيًا كميًا يعتمد على استبانتين لفهم الإمكانات الدلالية لهذه العناصر المهمة في وسائل التواصل الاجتماعي. وقد شملت العينة ٦٠ مشاركًا من كلية المعارف الجامعة، بواقع ٣٠ طالبًا (١٥ طالبًا و١٥ طالبة) و٣٠ أكاديميًا (١٥ أكاديميًا و١٥ أكاديمية). وقد صُمم الاختبار للكشف عن مدى الوعي والإدراك لدى الطلاب والأكاديميين فيما يتعلق بمعاني الرموز التعبيرية خلال جائحة كوفيد-١٩، وكذلك لمعرفة ما إذا كان سوء فهم معانيها قد يؤثر في الرسائل المقصودة ويحدّ من تحقيق التواصل الفعّال. كما سعت الدراسة إلى الكشف عن أية فروق محتملة بين المجموعتين موضع الدراسة. وصُممت الاستبانتان لمعرفة كيفية توظيف المشاركين لمعرفتهم بمعاني الرموز التعبيرية في ممارساتهم التواصلية. وقد أظهرت النتائج وجود اختلافات ملحوظة بين المجموعتين في طريقة التعامل مع الرموز التعبيرية، إلى جانب زيادة استخدام الرموز التعبيرية الخاصة بجائحة كوفيد-١٩ مقارنة بغيرها، بوصفها استخدامًا قائمًا على السياق.
الكلمات المفتاحية: الرموز التعبيرية (Emoji)، وسائل التواصل الاجتماعي، السيميائيات الاجتماعية متعددة الوسائط، عوامل الخطاب الفوقي (Metadiscourse Factors)، إيموجيتوبيا (Emojitopia)، الاستخدام القائم على السياق.

Introduction

Interaction through text-based apps has many central questions that hold it back from having the profundity of real-life and personal communication. One of these issues is the absence of emotional or body language factors. At the point when any online interaction is aided out through text, the absence of non-verbal signs eliminates the crucial non-linguistic helpers for the interaction. One answer for this issue is emojis, which are blends of equivalent characters to make visual portrayals of human feeling, e.g., :), :(, ^, and: D. While broadly utilized, there are just a set number of character mixes that make a relevant portrayal of a human feeling, and the specific importance of numerous emojis can be vague. To accommodate more enhancement to interaction support, "emojis" are a more enhanced collection of non-verbal or meta-discourse signs (Morstatter, Shu, Wang,& Liu, 2017:1 .(

The story started with the Oxford selection of the emoji (face with tears of joy) as the word of the year in 2015. Since their invention, "Emojis" present significant difficulties for analysts in multimodal digital platforms, since their importance lies for the time being neglected. Regardless of their expected comprehensiveness, the feeling communicated of an emoji may change from linguistic code to another and culture to culture. Understanding the significance of "emojis" concerning their setting of utilization is significant for media and digital frameworks (Barbieri, Kruszewski, Ronzano, & Saggion, 2019:200 .(

Emoji is an Anglicized version of two Japanese words – e, ‗picture', and moji, character'. Moreover, for the individuals who probably won't have perfectly clear regarding the matter, emojis are the beautiful faces – the winks, smileys, love hearts, etc – inserted as single character pictures, or glyphs, in our computerized keyboards. Since 2011, when they originally turned out to be broadly accessible on mobile devices, they have overwhelmed the world. Firstly, an emoji is a glyph encoded in textual styles, as different characters, for use in electronic correspondence. It's particularly common in advanced informing and web-based media. An emoji, or 'picture character', is a visual portrayal of an inclination, thought, element, status or occasion. From a verifiable point of view, the principal emojis were created in the late 1990s in Japan for use on the planet's first cell phone web system, at that point being worked on by Japanese media communications organization NTT DoCoMo. There were initially 176 emojis characters (Evans, 2017:15 .(

Danesi (2017) explains that the word "emoji" is a Japanese word that means 'image' and 'letter'. Emojis have a function that gives and emphasizes an additional effectiveness of the conveyed message (Arafah & Hasyim, 2019:23). Danesi's The Semiotics of Emoji is particularly vital in the current improvement of media visual culture, given that emoticon culture is getting progressively all inclusive, particularistic, and personalizable right now: In 2015, Apple added a skin tone modifier of five skin conceals for racial variety across its working frameworks (Tan, 2015); in 2016, the first arrangement of 176 emoticon was organized into craftsmanship history when it was added to the Museum of Modern Art's assortment (Galloway, 2016); and in 2017, Sony Pictures Animation delivered The Emoji Movie featuring human emoticon characters voiced by conspicuous Hollywood VIPs netting over USD216 million around the world (Box Office Mojo, n.d.). Clearly, the Golden Age of emoticon culture is presently (Abidin, 2018:451). ―Emojis add personality to the text and generate empathy among users, an essential thing for effective communication. Emojis fill the digital world with non-verbal signals that tell us how to interpret a message‖. In The Emoji Code, Vyvyan Evans (2017) clarifies that these symbols help to repeat in the computerized climate practically all the attributes of human correspondence in reality. The pictures work in a manner near to non-verbal components in up close and personal interaction (non-verbal communication, sound, and visual expressions) and convey the assortments of disposition and feeling between individuals who can't see the offers of their questioner .

Multimodality systematically focuses on how the society is rapidly changing its communicative language system to effectively adapt to new innovations in media and technologies. Multimodality postulates that for a semiotic resource to draw meaning, representation and communication must be presented by modes. Its focus relies on the

wholesome cauldron of meaning generating resources that people employ. Van Leeuwen (2005:1) defines social semiotics as "a new distinctive approach to the practice and theory of semiotics". In a multimodal social semiotic approach, different terms are introduced: mode, semiotic resource, and visual design. Modes create semiotic resources that are culturally and socially shaped and culturally infused for representation and communication, for example, language, image and gesture (Kress, 2010: 79). In social semiotics, all modes are seen as possessing particular meaning making potentials. Kress (2010:79) observes, 'semiotic modes promote different kinds of possibilities off human expression this is because of the varying potentials through which human expression and engagement with the world leads to different possibilities of affective development .'

Leeuwen (2005:2) defines multimodality as the combination of different semiotic modes such as language and music or language and signs in a communicative artifact or event. Leeuwen (ibid, 28) explains multimodality as being able to refer to the various ways in whichdifferent resource systems are combined and integrated within a certain context to derive meaning.It is concerned with the whole collection of meaning making resources that are employed by people in communication modes such as visual, spoken, written, gestural that are socially shaped and culturally molded by a 'system' designed by its users .

Emojis have made as remuneration from the failure of the conveyance manner of speaking, articulation, or motion or stance in composed interaction. In this manner, emojis can connect the partition between the message vis-à-vis discussions with the composition just as give a plan to the reader about what is implied by the author through the presentation of pictures of outward appearances (Cohn &Schilperoord, 2019:496 .(

Emoji have become a conspicuous piece of intelligent advanced interaction. A preposition suggested that the way people use emoji might be grammatically oriented; and how emojis have grammatical relation to a written text. Emojis that have grammatical functionswere minimal, and showed little consistency in ‗word order'. Second, emoji were substituted more for nouns and adjectives than verbs, while also typically conveying non-redundant information to the sentences. These findings suggest that, while "emoji may takesome directions in their interactions with grammatical structure in multimodal text-emoji contexts, they lack grammatical structure on their own" (ibid). ―That reveals that these symbols are not purely emotional, but they add layers of complexity and clarity to communication ‖.

Related Studies

Kaye (2017:67) remarks that the numerous participants who partook in her research about emojis as not being absolutely passionate, however they add layers of multifaceted nature and lucidity to correspondence. Kaye has her own contentions about the capability of emojis as the primary really worldwide type

of communication: "They may be the best tool for communicating with non-speakers of the same language and a system that is not too affected by different cultural conventions ".

Sadia (2018) has adopted socio semiotic multimodal theory by Kress & Leeuwen (2006) in his study to analyze emojis. It lays forth the idea that meaning a product of different semiotic resources. The study therefore sought to establish the semantic properties and multimodal attributes of these graphic signs as used in the written form. The results reveal that emojis offer gestural affordances based on their graphics, whereupon users can derive meaning, and that their interpretation is only context specific. This makes them inadequate as a form of written grammar. On the other hand, the findings show that emojis are sufficient in provision of paralinguistic features and serves to aid online written communication .

Barbieri, Kruszewski, Ronzano, and Saggion (2019:200) have explored how picking the correct emoji to outwardly supplement the significance of a text-message has become part of our day by day life. Emojis are pictures, which are normally joined with plain content, in this manner making another type of language. These photos are the equivalent freely of our residence, yet they can be deciphered and utilized in an unexpected way. In this paper we look at the importance and the use of emojis across various dialects. Our outcomes recommend that the general semantics of the subset of the emojis we examined is protected across all the dialects we investigated. Nonetheless, a few emojis are deciphered in an alternate manner from language to language, and this could be identified with socio-geological regard

A study conducted by Emojitopia at their beginning of the outbreak of Coronavirus or COVID -19, shows that people still use the same popular emojis with the little insertion of the health-related emojis as the following figure shows (Broni, 2020:2): · Face with Medical Mask

·Nauseated Face
·Face Vomiting
·Sneezing Face
·Face with Thermometer
·Face with Head-Bandage
·Ambulance
·Pill
·Syringe
·Microbe
·Soap
·Sponge

Figure 1: Emojis most commonly included in tweets containing "Coronavirus", "COVID-19" or "COVID19" (Emojipedia,March, 2020) (ibid .(

The addition of the microbe emoji in 2020 as it was already approved in Emojipedia since 2018. Many apps have included this emoji in their operating system but Apple has given a great similarity to the virus shape that appears on other apps as any other bacteria. The picture shows the different depictions of Covid-19 (ibid, 4 .(

Microbe Emoji as it appears on various platforms .

Arafah and Hasyim (2019) have deplored the phenomenon of emoji among internet users of social media (WhatsApp) in their The Language of Emoji in Social Media. The parts that will be highlighted are language (grammar) of emojis. The study has adopted an online questionnaire and the data has been analyzed descriptively, and interchanges in Whatsapp screenshots that utilizes emoji symbols. The results show emojis have a language (grammar) utilized in imparting in web-based media. Al-Zubaidi and Al-Rawe (2018) have adopted a multimodal social semiotic model to uncover the socio-cultural practices within the shopfront advertising signs. The study aims at identifying and exploring the impact of sociocultural practices and assumptions of English and Arabic languages on the textual and visual resources and organization of these shopfront advertising signs.Both qualitative and quantitative analyses have been utilized to test the validity of the study hypotheses. Results reveal that the shopfront advertising signs of the two linguistic contexts under investigation use the same textual and visual structure and resources for promotional purposes. Besides, the textual and visual structure and resources of both languages' signs are loaded with the socio-cultural practices of American and Iraqi speech communities .

Methodology

This study investigate the use of emojis in everyday language usage. The study adopts a quantitative research methodology relying on two questionnaires to understand the meanings of these highlighted factors of social media shown in appendix 1 and 2. Data have been collected of (60) participants divided into 40 students (15 male and 15 female students) and 40 academics (15 male and 15 female academics) table (1) and figure (2). The test is designed to find out how well students and academics are aware of the meanings of emojis and whether misunderstanding of their meaning may affect their intended messages. The two questionnaire are designed to find out how they apply their knowledge of emoji meanings in their communication. Two questions have been answered, they are

- How well do those participants use those emojis inspite their lack of fully comprehension of emojis meaning ؟
- Have the participants encountered any misunderstanding while using those emojis, especially during the Corona Pandemic ؟

Two questionnaires were conducted using the Google Forms. The first questionnaire contained the general questions that the participants may have

encountered in general during the coronavirus pandemic and how they use the notion of emoji in general. The second questionnaire conducts a specific use of specific emojis listed in order to find out the number of factors governing their usage. So the general and the specific questionnaires were conducted in order to figure out the amount of emoji awareness and to answer the research questions listed above. However, those questions are arranged to find out how often they use them by choosing the range of (always, often, sometimes, never, maybe) in the first questionnaire, while the second ranged between (yes, no, maybe, sometimes, seldom). The main factors in both questionnaires that each participant has to select were (gender, education, age, and geographical background). One limitation is that this study is limited to a certain sample of Participants of Al-Maarif University College and to validate the emojis as a supporting medium for meta-discourse factors .

Discussion and Results

The sample participants have been requested to answer the 20 questions in the general emojis questionnaire of the most common used questionsabout emojis in the Iraqi context. The variables that the participants have chosen from are (always, often, sometimes, never, maybe). The participants have showncertain differences, especially in relations to their gender, age, educational and geographical backgrounds. Male and female academics have revealed less tendency to useemojis as proposed by the questions chosen for the study, unlike the majority of the male and female students who have revealed a greater tendency to useemojis as proposed by the questions chosen for the study. The selected educational and geographical factors have an 80% influence on the process of using emojis in which younger participants have used them more than the older ones. The 60 participants of the sample data used in this study have revealed that age determines emoji usage which is an indication that the young participants (males and females) are more inclined to use emojis than the older ones among the academics of Iraqi context as shown in figure2 .

There is another variable showing that those from an urban background have used emojis more than rural ones. Urban Male and female students have shown a state of being more knowledgeable about the meaning of emojis than the rest of the sample data chosen for the study .

Figure (2): The general questionnaire of the emoji use of the chosen Sample of the study

Participants who interacted to the specific emojis questionnaire which is related to the pandemic have shown a great inclination to use the coronavirus-specific emojis in their everyday communication using social media as shown in table (1). Table (1): The Specific emojis used by the sample data

Also, the researcher asked an outsider question of (Describe 2020 in emojis).The participants (60) have reacted in a very interesting way using emojis to elaborate about this questions as shown in figure (3)

Figure (3): Describe 2020 in emojis

Emoji as non-verbal communication

Danesi (2017) affirms that individuals overall respond correspondingly to fundamental facial emojis because ―they incorporate the main micro-expressions in stylized outline form‖. Paul Ekman was one of the primary analysts to contemplate the language structure of facial appearances, writing an "atlas of emotions" that is presently utilized to a great extent by semioticians and researchers. Ekman saw that the fundamental feelings of "disgust, fear, anger, contempt, sadness, surprise, happiness" incite a similar miniature articulation designs in all over the world. Albeit a few variables, for example, geographic area, age, and race—can influence how an individual deals with these presentation (ibid, 36 .(

Emoji are frequently detailed as being utilized to bestow feeling to message, or to give data about non-verbal signals, for example, pitch or intention (for instance utilizing an emoji to communicate mockery). In any case, this examination featured that emojis are not just used to supplant non-verbal activities that would occur in face to face interaction. All things considered, the repurposed emojis were once in a while used to communicate conclusions that couldn't be made verbal. For some, users who are making an imparted emoji to exceptional significance was a method of passing on extremely complex sentiments and contemplation that would have not been hard to reference and portray rapidly in content. Along these lines, emojis are not necessarily viewed as an addition that can remark extra non-verbal data, yet as a method of imparting significant thoughts in totally non-verbal manners .

Durante (2016) has proposed that there are seven main functions of the non-verbal data proposed by emojis. According to these functions, Emojis can do the following: 1. "Repeat what is said or sent ؛

.Substitute a whole or part of a text ؛

.Complement and clarify a text

.Contradict a text

. Emphasize or elaborate a certain text ؛

.Accent or moderate a text; and

.Regulate a written text ."

Reality and Social media

This factor reveals how emoji depiction can be divided into two kinds – web-based and reality-based. As an instance, the yellow-circled emojis are invented to communicate the different feelings of real people and they are used semantically and pragmatically. They are also being aided later by the real-life shapes of human figures with different skin colours. This is an indication that they have originated to resemble real people in a digital platform.This likewise shows that adjusted emoticon can be both the reason for another comprehension inside a miniature culture (e.g., coincidentally making a typographical mistake

and ascribing it significance post hoc) or the symbolic visualization of a current interaction (e.g., picking an image to address a joke that has just been set up in vis-à-vis interaction .(

Visual real-life Similarities of Emoji

A few users detailed utilizing the visual portrayal of an emoji and redirecting it to mean a thing visually. It has been shown that individuals do in reality utilize that visual component of emoji when attributing importance to it. Utilizing emojis in this manner is a wonder that has been used for a wider scope in the study led by the Emojipedia sitethat found for example that the "Peach emoji (🍑)" is most regularly used to allude to posterior, as opposed to the natural product. This is because of its visual similitude. The wide spread of the Peach emoji in this manner caused some disruptions when Apple altered the so-called emoji andreplaced itwith a picture which didn't have a similar visual similarities .

Graphic symbols (emojis as an example) are so universally perceived as another correspondence code that there have just been instances of individuals being captured for utilizing symbols thought about compromising. In 2015, US youngster Osiris Aristy, at that point 17, was accused of terrorism for a Facebook post with a gun emoji focused on a cop. The young fellow asserted that it was a dissent against police brutality towards the African American population and the jury absolved him (Evans, 2015:4; McMahon &Kirley, 2019:43)

Conclusion

Emojis have been analyzed to show the processes used by people are using them to communicate in social media. It has been shown that emojis would create a shared personal meaning between participants creating a new cultural and mutual knowledge of specific meaning of emojis as meta-discourse factor. Past works have expected to investigate emoji understanding on an enormous social level, though this paper presents emojis understanding at a miniature size. The results of this study will be beneficial to the future work of emoji investigation, for this study features that emojis don't generally relate to their proposed, nor socially acknowledged implications. Covid-19 emojis are chosen to mean a particular idea, and similarly some emojis are picked deliberately on the grounds that they pass on the direct inverse of the proposed intention. This infers an alert is required when utilizing social media appsto comprehend the significance and utilization of emojis. Likewise with different papers around there we additionally presume that a global understanding of emojis might be needed to standardize how they appear across apps. It has been concluded that younger undergraduate participants (male and females) have a wider understanding and awareness of emojis in general and those related to covid-19 pandemic. The have also used them more precisely and understanding unlike the older academic participants. The current technique for proposing emojis in a

scope of various habits might be keeping clients from utilizing the circuitous possibility of emoji .

References

- Abidin, C. (2018). Book review: Marcel Danesi, The Semiotics of Emoji: The Rise of Visual Language in the Age of the Internet. Volume: 12 issue: 4, page(s): 450-453. Retrieved from https://doi.org/10.1177/1750481318773208b
- Al-Zubaidi, N. A. G. & Al-Rawe, M. F. A. (2018). Linguistic Landscape across Cultures: Semiotics of Shop Signs in Iraqi and American Contexts. Mauritius: LAP LAMBERT Academic Publishing
- Arafah, B. & Hasyim, M. (2019). The Language of Emoji in Social Media. in KnE Social Sciences. DOI: 10.18502/kss.v3i19.4880
- Barbieri, F. Kruszewski, G. Ronzano, F. &Saggion, H. (2019). How Cosmopolitan Are Emojis? Exploring Emojis Usage and Meaning over Different Languages with Distributional Semantics. Asian Social Science, 9(4):200 .
- Barbieri, F. Kruszewski, G. Ronzano, F. &Saggion, H. (2019).How Cosmopolitan Are Emojis? Exploring Emojis Usage and Meaning over Different Languages with Distributional Semantics. Asian Social Science, 9(4):200 .
- Broni, K. (March, 11, 2020). Spread of the Coronavirus Emoji. Retrieved frmhttps://blog.emojipedia.org/spread-of-the-coronavirus-emoji /
- Cohn, N., Engelen, J., &Schilperoord, J. (2019). The grammar of emoji? Constraints on communicative pictorial sequencing. Cognitive Research: Principles and Implications, (2019) 4:33 https://doi.org/10.1186/s41235-019-0177-0
- Danesi, M. (2017). The Semiotics of Emoji: The Rise of Visual Language in the Age of the Internet. London: Bloomsbury Publishing .
- Durante, C. (2016). Adapting nonverbal coding theory to mobile mediated communication: an analysis of emoji and other digital nonverbal. M.S. thesis, Dept. Commune. Stud., Liberty Univ., Virginia, Lynchburg .
- Evans, V. (2015). Can emojis really be used to make terror threats?. The Guardia. Retrieved from https://www.theguardian.com/technology/2015/feb/02/can-emojis really-be-used-to-make-terror-threats
- Evans, V. (2017). The Emoji Code: How Smiley Faces, Love Hearts and Thumbs Up are changing the Way We Communicate. London:Michael O'Mara Books Limited .
- Galloway, P (2016). The original emoji set has been added to the museum of modern art's collection. MoMA, 26 October. Available at: https://stories.moma.org/the-original-emoji-set-has-been-added-to-the-museum of-modern-arts-collection-c6060e141f61

- Kaye, L.K., Malone, S.A. & Wall, H. (2017). Emojis: Insights, Affordances, and Possibilities for Psychological Science. Trends in Cognitive Sciences, 21(2):66- 67 .
- McMahon, M.M. &Kirley, E.A. (2019). When Cute Becomes Criminal: Emoji, Threats and Online Grooming. Minnesota Journal of Law, Science & Technology, 21(1):37-91 .
- Morstatter, F. Shu, K. Wang, S & Liu, H. (2017).Cross-Platform Emoji Interpretation: Analysis, a Solution, and Applications. In Proceedings of ACM Conference, Washington, DC, USA, (Conference‘17), 9 pages. DOI:10.1145/nnnnnnn.nnnnnnn
- Sadia, J. O. (2018). A Socio-Semiotic Multimodal Analysis of Emojis as Used in Text Messaging. Nairobi: University of Nairobi .
- Sinha, K. K. . (2021). The Role of Pragmatics in Literary Analysis: Approaching Literary Meaning from a Linguistic Perspective. International Journal of English and Comparative Literary Studies , 2(2), 29-40. https://doi.org/10.47631/ijecls.v2i2.211
- Tan, M (2015). Apple adds racially diverse emoji, and they come in five skin shades. The Guardian, 24 February. Available at: https://www.theguardian.com/technology/2015/feb/24/apple-adds-racially diverse-emoji-and-they-come-in-five-skin-shades
- Wiseman, S. & Gould, S. J. J. (2018). Repurposing Emoji for Personalized Communication: Why ❓means ―I love you‖. CHI '18: Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems. April 2018 (152):1–10. Doi.org/10.1145/3173574.3173726.