Does 😂 = $?
A millennial's perspective about the role of emojis on brand's engagement and loyalty

Vincent Dutot (corresponding author)
Full professor
EM Normandie - CERCAP
30-32 rue Henri Barbusse, 92110 Clichy
vdutot@em-normandie.fr

Elaine Mosconi
Full professor
Université de Sherbrooke
2500, boulevard de l'Université, J1K 2R1, Sherbrooke, Québec, Canada
elaine.mosconi@usherbrooke.ca

Armel Quentin Tchanou
Associate Professor
Université de Sherbrooke
2500, boulevard de l'Université, J1K 2R1, Sherbrooke, Québec, Canada
Armel.Quentin.Tchanou@USherbrooke.ca

Abstract: Emojis are present in every discussion. More than half of all social media comments include an emoji. They represent nonverbal conversational cues in computer-mediated communications. Previous research has looked at the psychological and contextual use, self-representation, and linguistics aspects of emojis. However, few studies have investigated emojis as vectors of the engagement and loyalty of customers. This research fills that gap by investigating the impact of emojis on customer engagement and loyalty. Through a quantitative study of millennials (n= 322), our findings show the relevance of analyzing emojis and their strong influence on both engagement and loyalty. Our results also demonstrate significant differences based on social media platforms and gender. Important contributions for both academics and managers are detailed.
Keywords: emojis, brand's engagement, brand's loyalty, millennials

Résumé : Les émojis sont présents dans toutes les discussions. Plus de la moitié des commentaires sur les médias sociaux contiennent un emoji. Ils représentent des indices conversationnels non verbaux dans les communications assistées par ordinateur. Des recherches antérieures ont porté sur l'utilisation psychologique et contextuelle, l'autoreprésentation et les aspects linguistiques des emojis. Toutefois, peu d'études ont examiné les emojis en tant que vecteurs de l'engagement et de la fidélité des clients. Cette étude comble cette lacune en examinant l'impact des emojis sur l'engagement et la fidélité des clients. Grâce à une étude quantitative menée auprès de milléniaux (n= 322), nos résultats montrent la pertinence de l'analyse des emojis et leur forte influence à la fois sur l'engagement et la fidélisation. Nos résultats démontrent également des différences significatives en fonction des plateformes de médias sociaux et du sexe. Des contributions importantes pour les universitaires et les gestionnaires sont détaillées.
Mots clés : emojis, engagement, loyauté, milléniaux.

Introduction

5 billion. This is the number of emojis published daily on Facebook Messenger. Emojipedia.org report (2020) affirms that more than half of all comments made on Instagram include an emoji. And, out of the 3 304 emojis existing in the Unicode Standard (in December 2021), the top 5 are:

- face with tears of joy,
- loudly crying face,
- pleading face,
- rolling on the floor laughing, and
- red heart.

These symbols are considered a simple, fast, and easy way to express emotions, thoughts, and feelings (Gummer et al., 2020) and represent nonverbal conversational cues in computer-mediated communications (Riordan, 2017; Casado-Molina et al., 2019). Even if they are used across the world, they can be interpreted in a different way based on culture, age or meaning (Barbieri et al., 2016; Vidal et al., 2016). In a recent book, Seargeant (2019) addresses these aspects and sheds light on how emojis are changing communication, especially computer-mediated communication (CMC). The author shows that an emoji culture exists and impacts all aspects of communication through the world, including personal, professional, and other kinds of relationships. These nonverbal cues are used to compensate the lack of "personalization" of CMCs (Tang and Hew, 2019). Researchers have found evidence that using emoticons or emojis can enhance human interaction in virtual environments, by supplementing textual information exchange and allowing people to express emotions with ease (Derks et al., 2008). They can also influence the relation between a company and its customers.

Such a relationship depends on many factors, but few are more essential than feelings (Schirmer et al., 2018). Li et al. (2019) noticed that warmth, when a company is helpful and friendly, is a key driver to business and improved engagement. Moreover, customer engagement is created when businesses develop a more human side while communicating with clients online (Chang et al., 2019). Customer engagement is also considered as behavior that will lead to valuable feedback for companies (Chiang et al., 2017). Such feedback is generated more frequently online and, more precisely, through social media platforms. Academics in information systems (IS) and marketing have observed the importance of online platforms due to the simplicity of communicating and interacting (Chang et al., 2019). More recently research shows that social media is now an important part of most companies' strategies but has also led to new consumer behaviors due to the empowering aspect of these platforms (Appel et al., 2020). For a long time now, research has suggested that there is a strong notion of social belonging which develops through communities that welcome like-minded users to exchange and communicate (Dutot and Mosconi, 2016). Community and user feedback are valuable for companies because they can gather more information on their consumers' habits and preferences (Kim et al., 2019).

Customers like to know that companies are accessible, and there for them when they are in need (Packard et al., 2018). Clients can like, share, or comment content that can trigger emotional stimuli (Perreault et Mosconi, 2018). Each interaction can indicate a different type of interactivity and personal motivation from social media users. Social media interactions give more visibility to content, enables users to share their thoughts and acknowledge the content presented to them and emojis are now one of the best ways to do so.

Recently, researchers clarified that these non-verbal cues are often used to reinforce one's message and feelings and tend to represent a positive meaning (Li et al., 2019). Businesses need to understand how to use and to integrate emojis in their communication with customers as well as in the workplace (Business Insider, 2020; Robinson, 2019), since it is not clear for managers how to deal with this significant trend. Academics have looked at emojis from a language perspective and psychological point of view (Riordan et al., 2017), from a behavioral aspect when looking at impressions or communication (Kaye et al., 2017) but also from a contextual

perspective (Tauch and Kanjo, 2016. Other researchers have investigated the user behavior (Garrison et al., 2011), the difference between male and female use preferences (Wolf, 2000), the contexts in which emoticons are used (Derks et al., 2007) or the motivation for using emoticons (Lee et al., 2016). Finally, some studies have started to investigate how emojis could be related to the evaluation of a brand or a product (Scherr et al., 2019).
However, few studies have yet investigated the impact of emojis on customer engagement and loyalty, even if it has been recognized as an essential tool to communicate with customers (Casado-Molina et al., 2019; Doiron, 2018). This research wishes to fill that gap by answering the following question: to what extent do emojis influence customer engagement and loyalty?
Through an online survey and quantitative analyses, our findings suggest that emojis promote valuable engagement and loyalty for companies. They also highlight the psychological side of emojis and how people use them on social media. Next sections detail the theoretical background leading to the conceptual model, followed by the methods and results before a discussion and presentation of the main contributions. Finally, limitations and future research are presented.

Theoretical background

Visual communications

Research on visual communication has already been carried out in various disciplines like communication, psychology, art and science due to its wide applicability in different domains (Kujur et Singh, 2019). Since visual communication transmits information and ideas by using symbols and imagery, it can affect the viewers either affectively (emotionally) or cognitively (logically), or produce both reactions simultaneously (Fahmy et al., 2014). Almost ten years ago, Sharma et al. (2012) already stated that 75% of all information processed in human brain is from visual communication. Subsequent studies have confirmed that a visual advertisement with more information, and without any cognitive load, are found to be more persuasive than a verbal advertisement as it conveys a large quantity/amount of information instantly (Muñoz and Towner, 2017).
Visual content has also been associated with consumer engagement in advertising, and this has even accelerated with the diffusion of technological innovation in social media. Visual content was found to be one of the best strategies for stimulating online engagement (Hollebeek, 2011). By engaging with visual content, firms can increase awareness and lead engagement strengthening the bond between their brand and customers (Bowden, 2009; Higgins and Scholer, 2009).
If visuals do influence consumer engagement, it is still unclear which type of visual content is most effective at capturing the attention of the social media users (Kujur and Singh, 2019). Cvijikj and Michahelles (2013), applying uses and gratifications theory, proposed dividing social media contents into three types: informative content, entertaining content, and remunerative content. The three have an important effect on participation in that community (with entertainment having the strongest effect). Emojis fall into this specific category of content. More studies are still needed in that direction. However, in the context of visual communications, very few studies have been done as to what extent visual content influences consumer engagement in a social media environment (Lien and Cao, 2014). This study endeavors to fill this gap.

Emojis in Social Media Context

Emojis can be considered as a representation of facial expressions used in digital communication that indicates one's emotions about the subject (Li et al., 2019). The word

“emoji” comes from the Japanese, which means "Picture / Word" (Vidal et al., 2016). They are quite close to emoticons as shown in Table 1.

Table 1: Difference between emoji and emoticon

Over the years, such representations have become more common in online communication and now they can be found in messages, social media posts, mobile applications, or blogs (Scherr et al., 2019). Emojis help express a precise feeling and underline a specific sentiment in a message, which means users can express their interest in the relationship (Rodrigues et al., 2017). It gives users the opportunity to personalize their messages through these pictographic additions (Bacon et al., 2017). Emojis are graphic images that are very popular in 21st century communications (Gummer et al., 2020). Their use has grown drastically in private messaging, as well as in business communication (Casado-Molina et al., 2019). Gradually, emojis are replacing words to express emotions (Vidal et al., 2016; Rodrigues et al., 2017).
Research has highlighted that emoticons do have a positive impact on message interpretation (Hornung, 2015) and increase credibility, strengthening the intensity of a verbal message (Derks et al., 2008). However, emoticons can also create ambiguity in how these techno-emotional “workarounds”, like some nonverbal social cues, are not uniformly perceived by all individuals (Thompson and Foulger, 1996; Walther and D’Addario, 2001), and thus may contribute to misunderstandings instead of clarifying meaning.
In fact, everyone can have his/her own interpretation of what an emoji or an emoticon represents (Barbiere et al., 2016; Bacon et al., 2017; Vidal et al., 2016). They are seen as a positive addition to messaging and communication (Rodrigues et al., 2017). Negative responses are often “softened” thanks to adding these emojis, and for positive responses, emojis provoke an “additive effect” to the message. The use of emojis is often a way to translate a positive experience with a company (Li et al., 2019). People also use them within the workplace to show irony, praise, or even reinforce their feelings towards a colleague, as they can soften the response. Previous research also shows that in an awkward situation or a sarcastic message, using an emoji can give the respondent the perception of a more positive reaction to the message (Riordan, 2017).
Emojis seem to be a real asset to help companies to show warmth in feedback and communication to customers. However, for some online users, they indicate a non-professional attitude in an organization, because emojis are usually related to a friendly or a family relationship (Rodrigues et al., 2017).

Loyalty and Engagement

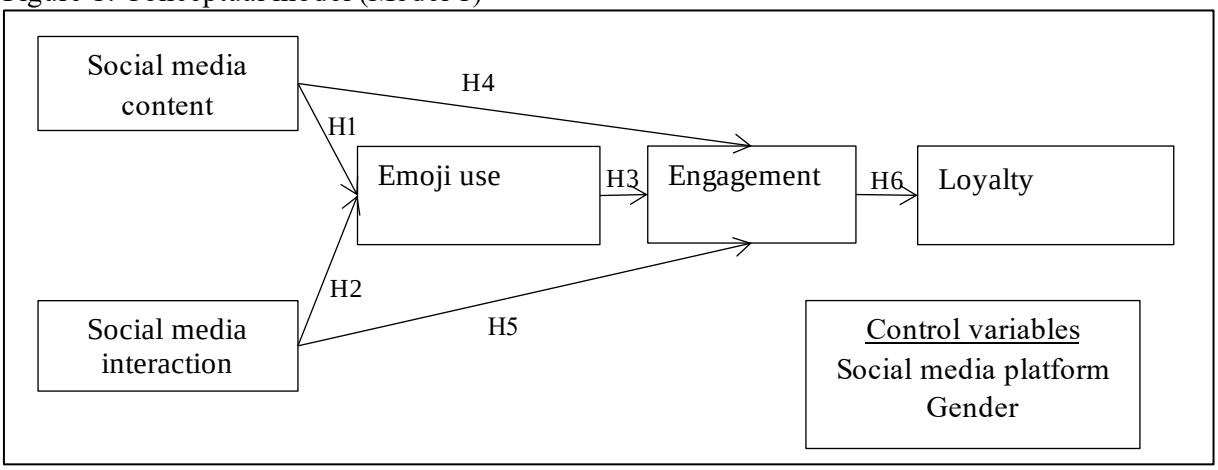
Loyalty to a brand has been considered an asset to any firm (Randels, 2001) and linked to customer satisfaction. Over time, this loyalty leads to commitment and positive behavior towards the firm. For Li et al. (2019), loyalty is driven by warm communication, good service, and efficient relations. Researchers proposed three central elements to the development of loyalty (Schirmer et al., 2018). Such elements are the satisfaction of a customer through multiple purchases, the trust developed between the brand and its customers and finally the long-term commitment built. Professionals have created personalized marketing and communication strategies to increase the effect of each element. Emojis have recently been found to be one of the most effective ones (Casado-Molina et al., 2019).
To increase customer engagement, companies show a more human side to their business through the content they publish (Chang et al., 2019). Engagement is described as a fundamental aspect of the “organizational incentives” in creating a relationship with customers (Meire et al., 2019). Davis et al. (2019) assessed how the readability of such communications affects customer engagement. Their findings show that the specific features in social media

(hashtags and emojis) tend to increase engagement. Recently, a social media perspective study on engagement showed that publishing pictures create a more positive response to a social media post (Li and Xie, 2020). It is more likely to increase purchase intentions and create a closer bond with the user (Li and Xie, 2020). Previous studies suggest that firms should take the initiative to listen to community members to improve the company's business strategy (Dutot and Bergeron, 2016; Dutot and Mosconi, 2016).

Research model and hypotheses development

The research model underlying the current proposal is presented in a simplified scheme in Figure 1. The main objective of this paper is to investigate the influence of emoji's use on engagement and loyalty to a brand.

Figure 1: Conceptual model (Model 1)



Social media users will most likely express their emotions online thanks to the use of emojis (Li et al., 2019). However, their usage will vary depending on the type of published content such as videos, pictures, status updates, or location tags, for example. Such elements are defined here as social media content. While using these elements, firms can generate engagement, which creates cognitive, emotional, and behavioral actions in a person's attitude towards a company (Kaptein et al., 2015). Nevertheless, to create engagement online, a company must stand out due to the increasing amount of content on social media (posts, pictures, and videos) (Li and Xie, 2020). This leads us to propose the two following hypotheses:

H1: There is a positive link between social media content and the use of emojis.

H4: Social media content is essential to increase customer engagement.

It is crucial for companies to be regularly in contact with consumers (Packard et al., 2018). On social media, users have a variety of interactions available. The most common ones are liking, commenting, tagging, and sharing (Perreault and Mosconi, 2018). There are personal motivations hidden behind these interactions (Burton et al., 2019). People also interact with content that gives them a particular feeling; to express these emotions, users interact with emojis (Li et al., 2019). As previously mentioned, to increase user engagement on social media, a company must create content that stands out (Li and Xie, 2020). Thus, we hypothesize:

H2: There is a positive link between social media interactions and the use of emojis.

H5: Social media interactions are positively associated with customer engagement.

Depending on their activity, the type of emojis used relies on the content users are faced with and the person's feelings (Bacon et al., 2017). Companies need to show a more human side in order to increase engagement on social media (Chang et al., 2019), and emojis are a simple communication way to show facial expressions. Customers on social media search for competence and warmth to engage with brands (Chang et al., 2019). Depending on the type of emoji customers use for their online communication, these will express their level of

engagement with the content and the company (Kujur and Singh, 2019). The type of emoji used shows that the person endorses the published content. Hence the following hypothesis:

H3: Usage of emojis is positively related to consumer engagement.

The objective of engagement for a business is to create a close and human relationship with consumers. By improving engagement, people will develop a positive response towards the company, and will also develop positive interactions online. On the other hand, loyalty is built on trust. People will spread positive attitudes by word of mouth but also will continue to purchase (Schirmer et al., 2018). Hence this hypothesis:

H6: Social media engagement has a positive effect on customer loyalty.

Methodology

Empirical data was gathered from a questionnaire-based survey. The online survey method was chosen based on past studies advice (Bethlehem and Biffignandi, 2012; Vehovar and Manfreda, 2008). We introduced the platform (YouTube, Instagram, LinkedIn, Twitter, TikTok and Facebook) and gender as control variables. To do so, we used multigroup analysis (MGA) (Hair *et al.*, 2019). For each platform, we divided the respondents in two groups based on their use habits. For gender, we had males and females. Social media content (SMC) was based on Perreault and Mosconi (2018) (7 items). Social media interactions (SMI) were measured based on Li and Xie (2020) (5 items). The measure of the use of emojis (EUSE) were based on research done by (Burton et al., 2019) and (Rodrigues et al., 2017) (9 items). Loyalty (LOY) was designed based on Schirmer et al. (2018) (7 items). Finally, to evaluate engagement (ENG), we used Dutot and Mosconi (2016) and Li et al. (2019) (6 items). Each item was evaluated on a 5-point Likert scale. The population targeted consisted of millennial users of social media. After a pre-test of the questionnaire with five millennials, the link to the English survey was posted directly on social media platforms (Facebook, LinkedIn, Twitter, and Instagram). We also relied on the snowball effect for participant recruitment. 322 questionnaires were collected over a period of one week. Respondents were in majority female (67.7%), aged between 19 and 39 (90.9%), living in Europe (88.5%), and having a master's degree or higher (41.5%).

Results

Two-step data analysis was as per by Anderson and Gerbing (1988). We first examined the descriptive statistics and the proposed measurement model, then the posited structural model. We used a partial least squares-based structural modeling (PLS-SEM) approach to validate the research model, as it is appropriate when the conceptual model is new (Chin and Newsted, 1999), when the goal is to explain variance (Gefen et al., 2011) or provide causal explanations (Sarstedt et al., 2017) or with a small dataset (Hair et al., 2019). The first step of our analysis consisted of simultaneously evaluating the measurement and the structural model in SmartPLS. We assessed the unidimensionality and reliability of all research constructs, through confirmatory factorial analysis (CFA). The reliability and convergent validity of the constructs are typically satisfied by retaining variables with alphas larger than the recommended value of 0.7, exceeding the value of 0.7 for the composite reliability (Hair *et al.*, 2019) and the value of 0.5 for the average variance extracted (AVE) (Fornell and Larcker, 1981; Gefen *et al.*, 2011). As a result, the measurement model was re-specified by deleting items that did not load sufficiently ($\lambda < 0.5$) on their associated dimension (see Appendix 1). The variance inflation factor (VIF) values were below the recommended cut-off value of 3.0. Hence, multicollinearity was not a concern (Hair *et al.*, 2019), and as well as common method bias (Kock, 2015). Discriminant validity was confirmed as the shared variance between one construct and other constructs and was lower than the average variance (Fornell and Larcker, 1981) for all constructs. Also, the heterotrait-monotrait ratio was well below 0.85 satisfying the threshold criteria set by Hair *et al.* (2019).

Assessment of the structural model

As presented in Appendix 2, four hypotheses out of 6 were accepted. Model 1 explains a significant part of both engagement (R2=27.8%) and loyalty (R2=28.7%). Strong relationships were observed between social media content and emoji use (H1) (β=0.346, $p<0.001$), engagement and loyalty (H6) (β=0.424, $p<0.001$) and emoji use and engagement (H3) (β=0.228, $p<0.001$). SMI and engagement relationship (H5) was significant (β=0.202, $p<0.001$). An alternative model without emoji use construct was tested to highlight variations in results with a simplified model, as suggested by Burton-Jones and Straub (2006). This alternate model explained a much lower part of the variance of engagement (R2=22.2%). The relationships between social media content and engagement (β=0.237, $p<0.001$), as well as the one between SMI and engagement (β=0.202, $p<0.001$) were stronger than in the complete research model. An indirect effects analysis of emoji use was performed in SmartPLS. We focused on the indirect paths, including emoji use. Results of this analysis show that a significant indirect effect exists for the link social media content – emoji use – engagement – loyalty (β= 0.034, T-stat= 2.680, $p<0.01$).

Finally, as presented in the conceptual model, we introduced the platform (YouTube, Instagram, LinkedIn, Twitter, TikTok and Facebook) and gender as control variables to look for some potential differences. To do so, we used multigroup analysis (MGA) (Hair et al., 2019). For each platform, we divided the respondents in two groups based on their use. For Facebook, Twitter, LinkedIn and TikTok group 1 corresponds to less than 15 minutes usage and group 2 more than 15 minutes. For Instagram and YouTube, group1 means less than one hour and group 2 more than one hour (see Appendix 3 and 4). Regarding gender we had two groups (1 – female and 2 – male) (see Appendix 5). In all both cases significant differences were found.

Discussion

The results indicate important determinants of the use of emojis on social media. Social media content directly affects how people feel and how they will use emojis. As per H1 and H2, content and interaction are predictors of the usage of emojis (supporting the works of Bacon et al., 2017 and Li et al., 2019), with content being the more important one. However, content does not have a direct effect on engagement (in direct opposition to Kaptein et al., 2015 and Li and Xie, 2020). H5 confirms that the more interaction generated on social media, the more engagement in the brand (as Ham et al. (2019) stated). When interacting with emojis, people reinforce their feelings through pictorial cues that are an emotional addition to their thoughts and sentiments. This direct effect is reinforced by an indirect effect through usage. Secondly, our results explain a significant part of engagement (R2: 28%) and loyalty (R2: 29%) (in model 1). Content, interaction, and usage strongly influence engagement. By developing a relationship with consumers online, clients will be more likely to interact and express themselves. Consumers will tend to express their appreciation or dislike through using emojis, which is why companies must pay attention to their community's activity (Dutot and Mosconi, 2016). By understanding their opinions, thoughts, or eventual hopes, companies will be able to use this outcome to develop their products or services (Brodie et al., 2013). We were able to explain that engagement is a way for companies to observe consumers and their willingness to interact with the companies on social media. However, engagement almost exclusively increases loyalty in our results, whereas emojis use has a relatively low influence (H3). Third, mediation analyses revealed that the type of emoji could influence the links to usage. So being able to adjust the communication to generate specific emojis seems a good solution for firms. Consumers will be more interested in relatable content that will trigger emotional stimuli (Burton et al., 2019; Li and Xie, 2020; Perreault and Mosconi, 2018). They express thoughts and feelings through social media platforms that will become valuable insights for a company (Rodrigues et al., 2017;

Scherr et al., 2019). Fourth and finally, loyalty is more difficult to obtain. It is, of course, developed through trust and commitment and cannot be translated through interactions nor, especially, emojis. Customer loyalty is developed through repeat purchases and contacts, and people will develop trust and commitment depending on the quality of the exchanges and experiences (Kaptein et al., 2015; Scherr et al., 2019). However, emojis are not a pure representation of customer loyalty. Even though emojis are a way to express oneself, they will not demonstrate if a customer is loyal (Schimer et al., 2018).

Effects of the control variables

As presented, we looked at the variations in our model based on social media platforms. Results indicate some very important elements that can be split in three categories. First the general impact of emoji use is more important for the most active users on Instagram, YouTube (more than one hour per day for the two platforms) and TikTok (more than 15mn per day). In contrast, on LinkedIn and Twitter, they work more efficiently on users spending less than 15mn per day on the platform. Regarding Facebook, effects are similar no matter the time spent on the platform. Second, regarding specific hypotheses, H4 (social media content engagement) is only validated for YouTube (group 2) and Instagram (group 2); and H2 (social media interaction emoji use) only for Instagram (group 2), Twitter (group 1) and TikTok (group 2). Such results offer interesting insights for community managers. Third, from a platform perspective, Instagram and YouTube are the two platforms where the use of emojis is the most efficient and has the greatest impact on engagement and loyalty to a brand. In opposition, TikTok and Facebook present the fewest hypotheses validated, suggesting that using emojis on such platforms is not recommended. We also investigated the gender effect, and our results tend to be opposite to previous works of Li et al. (2019) and Ham et al. (2019) which suggested that European, male, millennials were an easier target to engage and obtain loyalty. If, males are indeed influenced by emojis, females are even more influenced by such visual communications. Someone could argue that this result could be influenced by the global proportion of females on specific visual social media (in the majority on Instagram for example), but the five other platforms tested are more used by male (LinkedIn or Twitter for example) or almost equally (Facebook). Integrating visual communication elements (such as emojis) is therefore a key element in targeting females even more efficiently and generating engagement and loyalty to a brand.

Contributions

The main contribution of this research to theory is the identification of a new role of emojis as predictors of engagement and loyalty. As far as the authors know, this research is the first to test the influence of types of emojis on such variables in the context of social media. Second, it reinforces previous research which investigated visual communication by looking at the context of social media and the roles of emojis. In addition, we focused on the links between visual communication and engagement and loyalty, something earlier works have called for. Third, this research unveils the direct and indirect contributions of social media content, interaction, and emoji use to engagement and loyalty, opening the field to new elements to investigate. Finally, it opens the discussion on the use of such techniques on social media platforms. Results have shown precisely that such communication must be used as the primary way to engage with customers and influence their loyalty to a brand. Therefore, it is obviously very important for firms to analyze the visual content so that they can provide right and valuable content that will motivate consumers to follow or interact with a brand on social media. From a practitioner point of view, our study suggests that women are more inclined to use them and, consequently, more engaged/committed, and loyal to brands than men. Our findings also shed a light on millennials' usage of emojis and their influence on engagement and loyalty. By observing how millennials

interact on social media, we were able to see that this generation is quite sensitive to emojis. They enjoy, and appreciate, communicating with their peers as well as companies.

Conclusion and Research Agenda

Our research contributes to extending the body of knowledge related to communication strategies by investigating the influence of emojis use on engagement and loyalty to a brand. Throughout this study, our findings revealed the importance of emotional stimulus when users apply emojis when interacting on social media for engagement and loyalty. Our findings suggest the relevance of our variables (content and interactions) and the role of the platform. In addition, they demonstrate their effect on engagement and loyalty. Like most research, this investigation has limitations that must be mentioned. The findings of this research must be read with some caution due to its inherent limitations. The relatively limited number of respondents limits the degree of representativeness. Future research should explore different cultures, considering that our first results suggest interesting differences. Focusing on European vs Asian countries could be significant as the meaning of emojis could be different. Other follow-ups should look at the type of emoji or the platform used to post the emojis. Future research also needs to investigate how artificial intelligence and facial recognition are making their appearance in the world of emojis. Users could find them more appealing to interact with companies, or maybe find them too intrusive. This question has never been studied before and could be a useful way to develop academic and business knowledge concerning emojis. Research is needed regarding the analysis of the use of emojis in the context of live shopping. Finally, differentiating B2B and B2C firms to observe different impacts seems promising.

This research is still in progress. We designed and are running an online experimental study that will bring several additional contributions to this research. First, this type of design will allow to shed light on causal relationships between emoji use, social media content and our dependent variables, improving internal validity of our research. Second, the experimental study will provide strong ecological validity, as participants will be exposed to real stimuli representing commercial communications on social media involving or not emojis. Finally, external validity will be strengthened with a high sample size of about 800.

References

Anderson JC and Gerbing DW (1988) Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin* 103(3): 411.

Bacon C, Barlas FM, Dowling Z and Thomas RK (2017) How effective are emojis in surveys taken on mobile devices? Data-Quality implications and the potential to improve mobile-survey engagement and experience. *Journal of Advertising Research* 57(4): 462-470.

Barbieri F, Kruszewski G, Ronzano F and Saggion H (2016) How cosmopolitan are emojis? Exploring emojis usage and meaning over different languages with distributional semantics. In *Proceedings of the 24th ACM international conference on Multimedia*, pp. 531-535.

Bethlehem J and Biffignandi S (2011) *Handbook of web surveys* (Vol. 567). John Wiley & Sons. New Jersey.

Brodie RJ, Ilic A, Juric B and Hollebeek L (2013) Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research* 66(1): 105-114.

Burton JL, Mueller KM, Gollins J and Walls DM (2019) The impact of airing super bowl television ads early on social media: Benefits and drivers of watching, liking, and sharing advertisements on social media. *Journal of Advertising Research* 59(4): 391-401.

Casado-Molina AM, Rojas-de Gracia MM, Alarcón-Urbistondo P and Romero-Charneco M (2019) Exploring the opportunities of the emojis in brand communication: The case of the beer industry. *International Journal of Business Communication* 2329488419832964.

Chang, Y, Li Y, Yan J and Kumar V (2019) Getting more likes: the impact of narrative person and brand image on customer–brand interactions. *Journal of the Academy of Marketing Science* 47(6): 1027-1045.
Chiang CT, Wei CF, Parker KR and Davey B (2017) Exploring the drivers of customer engagement behaviours in social network brand communities: towards a customer-learning model. *Journal of Marketing Management* 33(17-18): 1443-1464.
Cvijikj IP and Michahelles F (2013) Online engagement factors on Facebook brand pages. *Social Network Analysis and Mining* 3(4): 843-861.
Davis SW, Horváth C, Gretry A and Belei N (2019) Say what? How the interplay of tweet readability and brand hedonism affects consumer engagement. *Journal of Business Research* 100: 150-164.
Derks D, Bos AE and Von Grumbkow J (2007) Emoticons and social interaction on the Internet: the importance of social context. *Computers in Human Behavior* 23(1): 842-849.
Doiron JG (2018. Emojis: Visual communication in higher education. *PUPIL: International Journal of Teaching, Education and Learning* 2(2): 1-11.
Dutot V and Bergeron F (2016) From strategic orientation to social media orientation: Improving SMEs' performance on social media. *Journal of Small Business and Enterprise Development* 23(4): 1165.
Dutot V and Mosconi E (2016) Understanding factors of disengagement within a virtual community: an exploratory study. *Journal of Decision Systems* 25(3): 227-243.
Emojipedia (2020) Home of Emoji Meanings. Available at https://emojipedia.org/ (accessed July 2020)
Fahmy S, Bock MA and Wanta W (2014) With What Effect III: Research on Behavioral Effects of Visual Communication. In *Visual Communication Theory and Research* (pp. 133-144). Palgrave Macmillan.
Fornell C and Larcker DF (1981) Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research* 18(3), 382-388.
Gefen D, Rigdon EE and Straub D (2011) Editor's comments: an update and extension to SEM guidelines for administrative and social science research. *MIS Quarterly* 35(2): iii-xiv.
Gummer T, Vogel V, Kunz T and Roßmann J (2020) Let's put a smile on that scale: Findings from three web survey experiments. *International Journal of Market Research* 62(1): 18-26.
Hair JF, Risher JJ, Sarstedt M and Ringle CM (2019) When to use and how to report the results of PLS-SEM. *European Business Review* 31(1): 2-24.
Kaptein M, Parvinen P and Pöyry E (2015) The danger of engagement: Behavioral observations of online community activity and service spending in the online gaming context. *IJEC* 20(1): 50-75.
Kim MY, Moon S and Iacobucci D (2019) The influence of global brand distribution on brand popularity on social media. *Journal of International Marketing* 27(4): 22-38.
Lee JY, Hong N, Kim S, Oh J and Lee J (2016) Smiley face: why we use emoticon stickers in mobile messaging. In *Proceedings of the 18th international conference on human-computer interaction with mobile devices and services adjunct*, pp. 760-766.
Li X, Chan KW and Kim S (2019) Service with emoticons: How customers interpret employee use of emoticons in online service encounters. *Journal of Consumer Research* 45(5): 973-987.
Li Y and Xie Y (2020) Is a picture worth a thousand words? An empirical study of image content and social media engagement. *Journal of Marketing Research* 57(1): 1-19.
Lien CH and Cao Y (2014) Examining WeChat users' motivations, trust, attitudes, and positive word-of-mouth: Evidence from China. *Computers in Human Behavior* 41: 104-111.
Meire M, Hewett K, Ballings M, Kumar V and Van den Poel D (2019) The role of marketer-generated content in customer engagement marketing. *Journal of Marketing* 83(6): 21-42.

Perreault MC and Mosconi E (2018) Social media engagement: Content strategy and metrics research opportunities. In *Proceedings of the 51st Hawaii International Conference on System Sciences*, January.
Ramarajan L, Rothbard NP and Wilk SL (2017) Discordant vs. harmonious selves: The effects of identity conflict and enhancement on sales performance in employee–customer interactions. *Academy of Management Journal* 60(6): 2208-2238.
Rodrigues D, Lopes D, Prada M, Thompson D and Garrido MV (2017) A frown emoji can be worth a thousand words: Perceptions of emojis use in text messages exchanged between romantic partners. *Telematics and Informatics* 34(8): 1532-1543.
Sarstedt M, Ringle CM and Hair JF (2017) Partial least squares structural equation modeling. *Handbook of market research* 26(1): 1-40.
Scherr S, Polst S, Müller L, Holl K and Elberzhager F (2019) *The perception of emojis for analyzing app feedback*. International Association of Online Engineering.
Sharma A, Bhosle A and Chaudhary B (2012) Consumer perception and attitude towards the visual elements in social campaign advertisement. *IOSR Journal of Business and Management* 3(1): 6-17.
Vidal L, Ares G and Jaeger SR (2016) Use of emoticon and emoji in tweets for food related emotional expression. *Food Quality and Preference* 49: 119-128.

Appendices

Appendix 1: Assessment of construct validity (n=322)

Dimension	**ITEM**	**Mean**	**SID**	**Loading**	**Cronbach alphas**	**Composite reliability**	**AVE**
Social media content	CONT1	3.95	0.95	0.718	0.820	0.866	0.519
	CONT2	3.07	1.15	0.746			
	CONT3	3.70	1.04	0.737			
	CONT4	3.56	1.02	0.669			
	CONT5	4.08	0.92	0.758			
	CONT6	4.22	0.82	0.692			
Social media interaction	SMI1	2.59	1.21	0.821	0.586	0.757	0.515
	SMI3	4.19	1.06	0.744			
	SMI4	2.54	1.15	0.563			
Emoji use	EUSE3	2.89	1.23	0.759	0.803	0.856	0.499
	EUSE4	3.08	1.26	0.781			
	EUSE5	2.39	1.11	0.646			
	EUSE6	4.11	1.00	0.693			
	EUSE8	3.20	1.36	0.683			
	EUSE9	2.79	1.41	0.667			
Engagement	ENG1	3.80	0.81	0.883	0.693	0.827	0.618
	ENG2	3.23	0.91	0.790			
	ENG5	4.03	0.70	0.671			
Loyalty	LOY3	4.02	0.93	0.646	0.806	0.874	0.637
	LOY4	4.39	0.70	0.857			
	LOY5	4.39	0.78	0.832			
	LOY6	4.52	0.76	0.839			

Appendix 2: Summary of hypotheses testing:

	Model 1 (with Emoji use)	**Model 2 (without Emoji use)**

Hypothesized relationship	Path coefficient	T-statistic	Validation	Path coefficient	T-statistic	Validation
H1: Social media content → Emoji use	0.346***	6.238	Supported			
H2: Social media interaction → Emoji use	0.105	1.916	Rejected			
H3: Emoji use → Engagement	0.228***	3.838	Supported			
H4: Social media content → Engagement	0.121	1.797	Rejected	0.237***	4.289	Supported
H5: Social media interaction → Engagement	0.202***	3.622	Supported	0.202***	4.389	Supported
H6: Engagement → Loyalty	0.424***	7.905	Supported	0.423***	7.653	Supported
R^2 engagement	$R^2 = 27.8\%$			$R^2 = 22.2\%$		
R^2 loyalty	$R^2 = 28.7\%$			$R^2 = 29.0\%$		

	YouTube (gr 1)		YouTube (gr 2)		Instagram (gr 1)		Instagram (gr 2)		LinkedIn (gr 1)		LinkedIn (gr 2)	
Hypothesized relationship	β	**T-statistic**	**β**	**T-statistic**	**β**	**T-statistic**	**B**	**T-statistic**	**β**	**T-statistic**	**β**	**T-statistic**
H1	0.345***	5.164	0.363**	3.483	0.400***	4.975	0.322***	4.182	0.355***	4.294	0.335***	3.670
H2	0.073	1.101	0.195	1.714	0.019	0.113	0.161*	2.242	0.057	0.762	0.166	1.570
H3	0.219**	3.130	0.236*	2.151	0.270**	3.259	0.183*	2.174	0.198**	2.733	0.343***	3.622
H4	0.088	0.867	0.218*	2.464	0.003	0.020	0.200**	2.583	0.143	1.733	0.043	0.380
H5	0.205**	2.903	0.204*	2.218	0.247*	2.046	0.183**	2.667	0.212*	2.884	0.222	1.954
H6	0.447***	6.034	0.427***	5.106	0.324***	3.550	0.516***	10.857	0.438***	6.738	0.414***	4.374

Appendix 3: Summary of the hypothesis testing (social media platforms)

*p<0.05 **p<0.01 ***p < 0.001

	Twitter (gr 1)		Twitter (gr 2)		Facebook (gr 1)		Facebook (gr 2)		Tik Tok (gr 1)		Tik Tok (gr 2)	
Hypothesized relationship	β	**T-statistic**	**β**	**T-statistic**	**β**	**T-statistic**	**β**	**T-statistic**	**β**	**T-statistic**	**β**	**T-statistic**
H1	0.322***	4.393	0.420***	5.020	0.269**	3.272	0.462***	6.313	0.325***	4.215	0.300**	2.916
H2	0.157*	2.375	0.081	0.710	0.122	1.548	0.097	1.114	0.128	0.701	0.262**	2.716
H3	0.226**	3.207	0.257**	2.598	0.252**	3.352	0.148	1.654	0.304***	4.433	0.037	0.345
H4	0.125	1.555	0.138	0.979	0.131	1.364	0.187	1.602	0.108	1.040	0.182	1.746
H5	0.245***	3.729	0.072	0.546	0.109	1.294	0.263**	2.952	0.080	0.824	0.358***	4.593
H6	0.450***	7.278	0.387***	3.861	0.421***	5.095	0.467***	7.124	0.364***	4.731	0.494***	8.079

Appendix 4: Summary of the hypothesis testing (social media platforms)

*p<0.05 **p<0.01 ***p < 0.001

	Female (gr 1)		Male (gr 2)	
Hypothesized relationship	**β**	**T-statistic**	**β**	**T-statistic**
H1: Social media content → Emoji use	0.324***	4.345	0.435***	5.347
H2: Social media interaction → Emoji use	0.070	0.191	0.972	1.705
H3: Emoji use → Engagement	0.217**	3.096	0.263*	2.418
H4: Social media content → Engagement	0.093	0.162	1.140	1.159

H5: Social media interaction → Engagement	0.247***	3.631	-0.026	0.203
H6: Engagement → Loyalty	0.510***	7.938	0.311***	3.703

Appendix 5: Summary of the hypothesis testing (gender)

*p<0.05 **p<0.01 ***p < 0.001