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EMOTIONS AND THEIR IMPACT ON THE BRAND: A NEUROSCIENTIFIC ANALYSIS OF TRUST AND SOCIAL MEDIA CONTENT SHARING IN GENERATION Z *

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Received 11 June 2025; accepted 16 September 2025; published 30 December 2025

Abstract. This study intends to use neuroscience tools such as eye tracking and facial expression analysis to further explore Generation Z's emotional responses to negative stimuli on social media. Particular emphasis is placed on negative emotions such as anger, contempt, fear, sadness and disgust and their impact on brand trust. The main objective of the research is to analyze how negative user-generated content (UGC) affect users' emotions, trust, and willingness to share content while also examining brands' strategies for responding to this content. With the increasing importance of digital marketing, understanding these emotional responses is crucial for brands to refine their online communication strategies and strengthen consumer trust. The findings of our study indicate that brand feedback does not mitigate the impact of negative emotions from negative UGC. Although most negative emotions did not have a statistically significant impact on trust and intention to share a post, we found that when it comes to trust, there is a noticeable mitigation of the impact of negative emotions. The emotion of disgust was significant for intent to share, and we observed a strong positive relationship between trust and intent to share the post further.

Keywords: user-generated content (UGC); brand trust; content sharing; emotion; digital marketing; social media; neuroscience analysis; eye tracking, FaceReader

Reference to this paper should be made as follows: Bacik, R., Loumova, V., Gavura, S., Tomasova, M., Misko, D. 2025. Emotions and their impact on the brand: a neuroscientific analysis of trust and social media content sharing in generation Z. *Entrepreneurship and Sustainability Issues*, 13(2), 122-142. <http://doi.org/10.9770/p4562938953>

JEL Classifications: M31, M37, D83

1. Introduction

Sustaining business success depends on an organization's ability to understand consumer behavior trends and use them (Xiang et al., 2015) to its advantage. In the current fast-paced digital environment, businesses must leverage digital marketing strategies to effectively engage with their target audiences (Tarabasz, 2024). The

* This article is one of the partial outputs under the scientific research grant VEGA 1/0488/22: Research on Digital Marketing in Tourism with an Emphasis on Sustainability Principles in the Post-Pandemic Market Environment) and VEGA 1/0506/24: Research on Aspects of the E-Commerce Process in the Dimension of Consumer Buying Behavior and Preferences with an Emphasis on the Principles of the Circular Economy. This research is supported by the Scientific Grant Agency of the Ministry of Education, Research, Development and Youth of the Slovak Republic and the Slovak Academy Sciences as part of the research project VEGA No. 1/0700/25.

advancement of digital technologies such as social media, smart mobile technologies, cloud computing, and the Internet of Things has changed the way individuals conduct their daily activities (Alruthaya et al., 2021). Digitization has become a mega trend (Štefko et al., 2021), and technology has simplified the way organizations connect with their customers and clients using digital channels and language (Duffett & Marauele, 2024).

Social media is ubiquitous, widely used and culturally relevant. Given the enormous potential audience that spends a lot of time daily using social media on various platforms, it is not surprising that marketers have adopted social media as a marketing channel (Appel et al., 2020; Mugunzva & Manchidi, 2024). The emergence of social media has had a significant impact on how people communicate and socialize. Many people use social media to create and maintain social connections with friends and build their reputation (Jang et al., 2015). Social networks are currently helping with e-commerce thanks to digitalization, of which social commerce is a subset, carried out through social networks (Hajli et al., 2017). There is even a group of people who have not experienced life without the Internet. We are talking about Generation Z (Gen Z), or digital natives, for whom digital technologies have become an essential part of the daily routine (Alruthaya et al., 2021). The rise of social media and its significant impact on consumer behavior and marketing practices has largely been shaped by the platforms themselves. People around the world use social media in various forms (e.g., news feeds on Facebook and Twitter, private messaging on WhatsApp and WeChat, and discussion forums on Reddit) for several purposes. More recently, platforms such as Instagram and Snapchat have come to the fore, emphasizing images and videos over text (Appel et al., 2020). Nastišin et al. (2024) point out that visual content, specifically videos and photos, has a stronger impact on triggering user reactions compared to text posts and links, highlighting the importance and effectiveness of using visual media to engage and capture the audience's attention. Instagram, in particular, is growing in popularity among young people, reaching 1.5 million users in 2020, 32% of whom are young people in emerging adulthood (Sebokova & Filipcikova, 2021). According to the study by Lenghart and Leskova (2023), for Generation Z in Slovakia, the most popular social networking platform is YouTube, followed by Facebook and Instagram, which are ranked third. When it comes to text formats such as posting posts, blogs, comments, and statuses, Instagram emerged as the most used platform, as well as visual formats such as photos.

The rapid evolution of consumer behavior in the digital age presents both opportunities and challenges for marketers. As Tupikovskaja-Omovie and Tyler (2021) highlights that rapid changes in digital consumer behavior, influenced by the exponential adoption of smartphones, require timely and sophisticated responses from retailers to meet consumer needs. Nowadays, social networks are increasingly being used for purchasing decisions. Hudson et al. (2016) report that marketers are therefore adapting their strategies to reach more and more consumers and are placing greater emphasis on capturing consumers' attention on social media to encourage customer engagement. To effectively manage their reputation using e-marketing tools, organizations must consistently adhere to key principles, including prioritizing customer needs, ensuring top-notch quality, and continuously innovating their communication channels. Special emphasis should be placed on delivering high-quality content, as it plays a pivotal role in shaping public opinion in the online space, thereby directly affecting the organization's image (Štefko et al., 2021). In 2020, Appel et al. (2020) reviewed the future direction of social media marketing and highlighted critical areas for further research, noting the importance of understanding the side effects of distrust of social media. They highlighted the impact that distrust of platforms can have on the credibility of content, including brand information and user-generated content.

There is an ongoing discussion about the social media activities of brands and companies. Some researchers believe that social media provides a unique opportunity for brands to foster customer relationships, while others believe otherwise (Laroche et al., 2013; Išoraitė, 2024; Ivančík et al., 2024; Msosa et al., 2024).

Laroche et al. (2013), Godey et al. (2016), and Hudson et al. (2016) state that there is currently little evidence on how social media marketing activities influence brand value creation and consumer brand behavior. The study by Godey et al. (2016) and Konečný et al. (2024) suggests that social media marketing efforts have a significant positive impact on brand equity and on two main dimensions of brand equity: brand awareness and brand image.

Another highly discussed marketing tool is user-generated brand content (Mayrhofer et al., 2020). User-generated content (UGC) refers to any text, data or activities created by users of online digital systems, shared and distributed by users themselves through independent channels. This content generates expressive or communicative impact, either alone or in combination with other contributions from the same or different sources (Santos, 2022). Kim and Johnson (2016) highlight that positive UGC related to a brand is essential to the brand because it stimulates eWOM (electronic word-of-mouth recommendation) type behaviors in consumers while promoting customer engagement and contributing to the growth of brand sales. On the other hand, Bigné et al. (2023) point out that negative UGC may discourage consumers from using a particular product or service, thereby creating a risk to brand reputation.

These findings on the impact of UGC are closely related to the concept of cause-related marketing (CRM), which is one of the most versatile activities within Corporate Social Responsibility (CSR) initiatives (Bhatti et al., 2023). CRM is a marketing strategy in which brands link their products or services to the promotion of socially beneficial causes. In this way, CRM not only improves corporate image but also positively influences consumer attitudes towards the brand (Badenes-Rocha et al., 2021). The combination of UGC and CRM can have a synergetic effect when users create content that supports a brand's CSR activities. When consumers share positive experiences with a brand that supports socially beneficial goals, this content can further strengthen the credibility of the brand. Conversely, negative reactions to inauthentic or poorly implemented CSR activities can lead to the spread of negative UGC, damaging the brand's reputation. Therefore, it is crucial that CRM initiatives are set up correctly and aligned with the values of the target audience to promote positive user-generated content and minimize the risk of negative UGC.

This experimental study focuses on the effects of negative user-generated content (UGC) on brand trust in a Generation Z social media environment. It examines how negative UGC and companies' reactions to this content affect users' attitudes and behaviors on Instagram. A fictitious social network advertising posted by a fictitious company selling SMART products was tested. At the same time, this post contained a description of a negative user comment and the company's reaction. The individual stimuli were designed to allow for the exploration of subconscious and conscious reactions to the brand's crisis communication. The study examines consumer reactions to social media content using two primary methods. The first group are neuroscience tools such as eye-tracking and facial expression analysis. Lim (2018) highlights that these tools are particularly valuable because they reveal insights that are usually hidden - they allow direct access to neural responses without the need to explicitly ask about respondents' thoughts, emotions, or decision-making processes. The second tool used is a questionnaire, which serves as a complementary method to neuroscience measurements. According to Vences et al. (2020), the combination of objective and subjective measurements is important to obtain a comprehensive picture of consumer reactions.

Recent research has increasingly focused on the role of digital transformation and decision-support systems in tourism, healthcare, and media, highlighting their socio-economic and managerial impacts. Gavurova et al. (2025) developed a hybrid decision-support model to assess the socio-economic effects of digital transformation in tourism, while another study by Gavurova and Polishchuk (2025) proposed a fuzzy set-based system to enhance travel planning for people with disabilities, demonstrating the inclusivity potential of digital tools. In the area of digital media, Moravec et al. (2025) examined algorithmic personalization and its implications for knowledge gaps and media literacy, which is closely related to public trust and digital communication. Complementary findings by Gavurova et al. (2024) emphasized the importance of information-analytical systems for evaluating automated news content, further linking digital transformation with media literacy. In the healthcare context, Smolanka et al. (2024) addressed the challenges of integrating IT solutions in healthcare institutions, and Gavurova et al. (2024) proposed an intellectual model for analyzing patient trust in medical staff, illustrating how digital systems can strengthen confidence and transparency in primary healthcare. In addition, Skare et al. (2023) presented a large-scale decision-making model for evaluating tourism infrastructure funding, reinforcing the practical significance of digital transformation in public decision-making processes. Collectively, these studies demonstrate that the intersection of digital technologies with tourism, healthcare, and media creates new frameworks for socio-economic development, public trust, and inclusive decision-making.

This study contributes to the understanding of how different forms of content, including negative UGC, affect trust and brand loyalty. It also examines how effective brands' responses to this content are and their impact on consumers' overall perceptions. These insights are essential for building sustainable digital marketing strategies that take into account the specific needs of Generation Z.

2. Formation of research hypotheses

As mentioned above, in the current digital age, social media plays a key role in the communication between brands and consumers. An essential part of digital marketing is customer reviews and statements about products or services, which significantly influence consumer decisions and satisfaction levels. The role of these reviews in digital marketing is undeniable. Through digital marketing, many customers make repeat purchases online, and their reviews provide information about the satisfaction levels of their loyal customers. Reviews help the other person decide whether to buy or not (Vanitha & Anuradha 2024). They are also critical data that have a significant impact on product sales (Garg et al., 2022). Through various platforms, brands can not only showcase their products but also actively form relationships with customers, build trust and increase loyalty (Bhatti et al., 2023). This dynamic is particularly visible in the context of user-generated content (UGC) and Corporate Social Responsibility (CSR) initiatives, which can promote credibility and positive brand perception but can also have the opposite effect, i.e., distrust and negative brand perception.

CRM, as a specific tool linked to CSR, enables brands to connect their products or services to socially beneficial goals. This approach can improve corporate image and positively influence consumer attitudes towards the brand (Badenes-Rocha et al., 2021). Negative emotions that arise from inappropriately implemented CSR initiatives or from a brand's inadequate response to criticism can increase the risk of spreading negative UGC, which seriously damages the brand's reputation. We suggest that an important strategy to mitigate the negative impact is a brand backlash to negative content. This response can not only mitigate negative emotions but also improve brand trust and foster customers' intention to share brand-generated content. Based on the above findings, the following hypotheses were formulated:

H1: Brand backlash mitigates the impact of negative emotions triggered by posts that contain negative content.

We hypothesize that brand backlash to a negative comment will mitigate its impact on respondents' emotions. The irrational behavior is based on consumer safety, where despite the influence of culture, etc., importance has been and still is given to attributes such as awareness, certification, origin, quality, etc. (Wang et al., 2018). It is irrational beliefs that can play an important role in cognitive evaluation (David et al., 2002). Since the habituation effect may have occurred in our study, where Thompson and Spencer (1966) formulated the first basic formal definition of this phenomenon, the habituation effect may thus cause a reduction in responses in repeated simulation.

H3: Brand response reduces the negative impact of emotions triggered by posts with negative user-generated content with the intention to share brand-generated content.

Social networks are one of the most effective tools for connecting products with potential customers today. Social networking platforms provide a means for social interaction and allow brands to connect with consumers on a deeper level, building trust and loyalty (Sajid, 2016). As Štefko et al. (2021) state, social networks provide an opportunity for service providers and sellers to utilize recommendations from family and friends as an effective marketing tool. This theme is echoed by Appel et al. (2020), who highlight that distrust of social media platforms can negatively affect the credibility of content shared by brands, including user-generated content (UGC). Customer engagement has been recognized as a fundamental determinant of brand loyalty (Li et al., 2020). The results of Badenes-Rocha et al. (2021) show that the more time is spent looking at a company's reactions to negative user-generated content, the more the relationship between trust and consumer advocacy towards the company weakens. Research by Sharma and Klein (2020) confirmed that engagement is key to online shopping; this study uses consumer perceived value, perceived trust, and susceptibility to interpersonal influence to provide further insight into consumer intention to participate in online group buying.

User-generated content (UGC) drove higher purchase intent than published ads and brand posts. Increased user attention reduced negative reactions to UGC compared to brand posts. The study suggests that while branded messages on social media activate users' awareness of persuasion, user-shared content can persuade without increasing this awareness. Stricter regulations are recommended to ensure transparency, including disclosure requirements for UGCs involved in promotional campaigns to protect consumers from hidden advertising practices (Mayrhofer et al., 2020). These issues are particularly key in the Generation Z environment, which is heavily influenced by visual and emotional stimuli on social media. Authors Hudson et al. (2016) surveyed consumers in France, the UK and the US and compared those who interact with their favorite brands via social media with those who do not. Findings showed that social media use was positively related to the quality of the relationship with the brand, and the effect was more pronounced for perceptions of high anthropomorphism (the extent to which consumers associate human characteristics with brands).

H2: Negative emotions from posts with negative user-generated content (UGC) are less likely to affect brand trust when brand feedback is present.

Creating trust and interactions is the foundation of effective customer engagement with a brand. Li et al. (2020) highlight that brand loyalty can be built through customer engagement, with trust and brand attachment playing a key role. Qin (2020) adds that brand-consumer interactions are influenced by consumers' motives, such as information-seeking and self-identity reinforcement. These motives influence users' behavior, whether in consuming content or creating it.

Perceived interactivity and engagement are important factors in building brand trust, as supported by a study by Samarah et al. (2022) showing a positive association between customer engagement on social media, brand trust and loyalty. However, negative content can disrupt these relationships. Badenes-Rocha et al. (2021) point out that a brand needs to actively respond to the negative emotions evoked by negative UGC to minimize its impact. Brand loyalty is one of the essential tools for any company to thrive in a highly competitive marketplace. A strong brand promotes a lasting relationship between consumers and producers (Ahmed et al., 2014). Laroche et al. (2013) confirm that brand trust has a mediating role in converting the effects of strengthened relationships in the brand community into brand loyalty. Ahmed et al. (2014) define brand trust as the assurance that a brand provides to its customers to meet their expectations. Brand trust plays a critical role in fostering customer loyalty; without it, customers are unlikely to cultivate a sense of brand loyalty. To establish trust, consumers must evaluate and verify the information provided about the product.

H4: Trust in brand-generated posts positively influences consumers' intention to share that content on social media.

According to the theoretical elaboration and pointing to various research studies, especially the aforementioned studies by Bigné et al. (2023) and Badenes-Rocha, Bigné, and Rouiz (2021), we have established the following concepts of analysis and individual hypotheses that focus on the behavior of the participants within the framework of our research questions. Bigné et al. (2023) focused on the influence of emotional and cognitive factors on decision-making processes, while Badenes-Rocha, Bigné, and Rouiz (2021) analyzed cultural and social differences in responses to marketing stimuli. These research approaches also helped us, in combination with the previous literature search, to formulate the above hypotheses.

3. Research methodology

The main aim of the research is to analyze how negative user-generated content (UGC) affect users' emotions, trust, and willingness to share content while also examining brands' strategies for responding to this content. The experimental research was carried out in Slovakia in the specialized Laboratory of Neuromarketing, which operates at the Faculty of Management, Economics and Business of the University of Presov. The research was carried out with the aim of clarifying the subconscious reactions of consumers to various visual and emotional stimuli while strictly observing the principles of neuromarketing research and ethical norms defined by professional standards. Each participant was duly informed about the biometric testing process, the reasons for

its implementation, and how their personal data would be processed and stored while ensuring maximum transparency of the entire process.

Participants received detailed information materials that provided them with an overview of the research objectives, the specific implementation steps and the measures taken to protect their privacy. Consent to participate in the research was expressed by a handwritten signature, which also confirmed their understanding of all relevant aspects. An important principle of the research was the anonymity of the participants, thus minimizing potential concerns about misuse of data and maximizing trust between the research team and the respondents. Data collection took place between 17 and 31 October 2024. Participants were informed in detail that they were taking part in a neuromarketing study designed to explore their unconscious responses, with an emphasis on analyzing their spontaneous emotional and physiological responses to different stimuli. The study of consumers' implicit emotions has always been described as a difficult and complicated mission. This approach has made it possible to collect valuable data that contribute to a better understanding of consumer behavior and preferences (Ismael, Ploeger et al., 2019; Gunaratne et al., 2019).

3.2 Research sample

The total research sample consisted of 141 respondents, of which 67 were male (47.52%) and 74 were female (52.48%), with a mean age of 21.04 years. The representation of males and females in the sample allowed for a balanced view of the responses of both genders, which is important for capturing variability in subconscious consumer responses. Equally, the average age of the participants was a useful factor for examining the behavior of a generation that is often considered a key target group in modern marketing campaigns. The sample was composed exclusively of students from the Faculty of Management, Economics and Business of the University of Presov, with 86 (60.99%) participants of Slovak and 55 (39.01%) of Ukrainian nationality. Table 1 provides a detailed description of the composition of the research sample by gender and age of the research participants.

Table 1. Research sample of participants

	Count (%)	
Gender	Male	67 (47.52)
	Female	74 (52.48)
	Total	141 (100)
Year of birth	1999	2 (1.42)
	2000	14 (9.93)
	2001	25 (17.73)
	2002	25 (17.73)
	2003	35 (24.82)
	2004	20 (14.18)
	2005	11 (7.8)
	2006	9 (6.38)
	Total	141 (100)
Educational level	Bachelor	78 (55.32)
	Diploma	63 (44.68)
	Total	141 (100)
Nationality		
	Slovak	86 (60.99)
	Ukrainian	55 (39.01)
	Total	141 (100)

Source: own elaboration (2024)

Since the research was conducted on a sample of students, the age range is between 20 and 26 years. We are talking about the so-called Generation Z. The generation born between 1995-2009 when the Internet quickly became popular, is known as "Internet natives" (Duffett, 2020). These groups of consumers have specific characteristics. Generation Z grew up in a digital world and is distinguished by high digital literacy, rapid adaptation to new technologies, and a preference for authentic brands that share their values (Duffett, 2020; Francis, Hoefel, 2025). Organizations should embrace these traits and incorporate the uniqueness of this cohort into the development of more sustainable marketing communications (MC) to promote the values of diversity that are prevalent among young consumers (Duffett, 2020).

The selection of students from the Faculty of Management, Economics and Business was deliberate and made based on availability. The student samples were deemed appropriate and even necessary because they represent the primary target group for the advertising practices under study. The participants had a basic understanding of marketing, which may have contributed to their deeper understanding of the test stimuli and the experiment itself. This homogeneity of the sample in terms of education also reduced the variability caused by different academic backgrounds, thus strengthening the internal validity of the research.

3.3 Experimental design, procedures, and incentives

Research participants were presented with a post on the social network Instagram, published by WatchWorld, a fictitious company selling SMART products. The fictional Instagram fan pages, including brand-related UGC, were developed as visual stimuli and presented through an online questionnaire that we administered ourselves. This post provided information about the company's initiative, but a negative comment was posted underneath that had the potential to influence participants' perceptions. Following this initial display, an identical post was presented to participants, this time with the company's response to the negative comment. This pair of stimuli was designed to allow for the exploration of subconscious and conscious reactions to a brand's crisis communication. Each of the stimuli was presented to participants for 40 seconds. This exposure time was carefully calculated based on pre-testing conducted on a sample of seven participants. The aim was to ensure sufficient time to perceive the visual and content elements of the stimuli presented while allowing participants to immediately respond to the questions that followed each stimulus.

The stimuli were presented on a 24-inch PC monitor with 1920 x 1080p resolution, which provided the high-quality display needed for accurate tracking of visual responses. An advanced 60 Hz Smart Eye AI-X eye-tracker system, located directly on the monitor, was used to measure eye movements. This hardware allowed accurate analysis of gaze focus, time spent on individual post elements, and visual scanning dynamics. Eye tracking has wide application in digital marketing, where it serves as a valuable tool for analyzing consumer behavior (Tupikovskaja-Omovie & Tylerand, 2021) and helps optimize marketing strategies by better understanding customers' visual attention (Casado-Aranda et al., 2020; Azawai 2019) and decision-making processes.

The Logitech C980 high-resolution 1920 x 1080p webcam was used to capture surface facial emotions that reflect immediate emotional reactions to stimuli. This camera worked in conjunction with the AFFDEX software module integrated into the Imotions 10 platform, which allowed for detailed analysis of participants' facial expressions. The whole process was carried out on a PC with an Intel Core i5 processor, which provided sufficient power for real-time data processing. The Imotions 10 software included modules for both eye-tracking and emotion analysis, thus enabling synchronous evaluation of visual and emotional reactions to the presented stimuli. This integrated approach allowed for comprehensive data on participants' behavioral interactions with social posts containing crisis elements and brand responses.

Visual attention is a key metric in neuromarketing because it shows how a consumer interacts with visual stimuli (Royo-Vela & Varga, 2022). Two important metrics to measure attention are fixation duration (ms) and time to first fixation (ms). Fixation duration measures how long a participant's gaze remains on a particular visual stimulus. Longer fixation duration indicates a higher level of engagement or interest in the item. Time to first fixation reflects how quickly the participant fixates their gaze on a given element after the stimulus presentation begins. A short time indicates a high ability to attract attention (Capogna et al., 2021; Tzamaras et al., 2023). Other indicators are fixation counts, which are the sum of repeated glance times at the target region of interest, and dwell time, which reflects the brain's time to acquire and process information. Both are positively proportional to visual attention (Hwang et al., 2018).

The data on trust and intention to share were collected through Table 2 questions based on theoretical elaboration and other authors such as Majerczak and Strzelecki (2022); Hancock et al., (2023), Bigné et al. (2023); Hu and Noor (2024).

Table 2. Questionnaire items

	Cronbach's
Trust	0.722
I find the information shared by WatchWorld to be truthful and honest.	
WatchWorld is interested in the opinions of its customers.	
I think that WatchWorld has made its products from high-quality materials at a high technological level.	
Intention to share	0.739
I would also share WatchWorld posts on my social networks.	
I would also recommend the product to my friends and acquaintances.	
I would like to be part of the WatchWorld community based on their online communications.	

Source: own elaboration (2024)

Cronbach's alpha is a statistical indicator of the internal consistency of a measurement instrument, such as questionnaires or scales, and is used to assess the extent to which items within an instrument are homogeneous and related. The results of 0.722 and 0.739 indicate an acceptable and acceptable reliability result (Streiner, 2003).

Figure 1 shows the presented stimulus with the selected AOIs and the resulting attentional heat map of the research participants in the feedback stimulus.



Figure 1. Incentive with company feedback

Source: own elaboration (2024)

Figure 1 shows the stimulus, which includes the image/product, the company's contribution, the user's negative comment, and the company's feedback. The resulting heat map shows the areas where participants focused their attention the most, with the intensity of the colours visualizing the distribution of attention, which we will address when analyzing and comparing each AOI.

AOI is a concept often used in neuromarketing research to analyze visual attention using eye-tracking technology. AOI refers to specifically defined areas on a visual stimulus that are the focus of research interest. In our case, four areas of interest are identified (Table 3).

Table 3. Selected areas of interest (AOI)

AOI 1 WatchWorld's contribution: <i>more than just a watch, your personal trainer, assistant and health watchdog all in one! Track your health, stay in touch with your loved ones and let your wrist stand out. All in a premium design with top technology to make the most of your everyday life.</i>
AOI 2 Negative reaction/user comment: <i>another overpriced watch that pretends to be something special. You can find much cheaper ones on the market with the same features. I feel like we're just paying for the name here</i>
AOI 3 Picture of the product presented by the company.
AOI 4 Company's response to a negative user comment: <i>thank you for your comment. But our customers know that their quality and features bring a sense of security and comfort. This makes them an exceptional product for exceptional people.</i>

Source: own elaboration (2024)

Based on the stated research objectives, methodological framework and formulated hypotheses, regression analysis and analysis of the data obtained using eye-tracking technology were conducted. Regression analysis was used to uncover relationships between participants' behavioral or emotional responses to the presented stimuli as well as trust and intention to share. Eye-tracking analysis was applied to interpret participants' visual attention. Key metrics such as fixation duration and time to first fixation provided important data on which elements (AOIs) of the stimulus were most attention-grabbing and how participants visually processed the presented content.

4. Results

Since we examined negative UGC commentary, which is often highly sensitive and can affect brand perception and reputation, in conjunction with the emotions generated by it, both before and after the publication of the brand's response to the commentary, we focused only on negative emotions. In order to quantify its impact, we used the AFFDEX FaceReader for face reading (emotion) and eye-tracking (eye movement), which allowed us to track the attention and emotional reactions of respondents to the depicted post. The measurements of each emotion that respondents showed during the visualization of the experimental research are recorded in Table 4. We focused on negative emotions in relation to the company's reaction to a negative UGC comment from a customer or an Instagram social network user, and there was no reaction, i.e., no feedback from the company. We investigated the impact of negative emotions without CRM globally and in the presence of CRM. We found the variability as well as the intensity of emotions by plotting means and standard deviations.

Table 4. Descriptive statistics of the measured negative emotions during post-visualization

		Global (141)	Feedback	Without feedback
Anger	Average	0.285	0.298	0.273
	St. Dev.	0.408	0.417	0.399
Contempt	Average	0.684	0.807	0.562
	St. dev	1.850	2.274	1.426
Fear	Average	0.319	0.420	0.219
	St. dev	0.367	0.585	0.148
Sadness	Average	0.265	0.227	0.302
	St. dev	0.250	0.174	0.327
Disgust	Average	0.045	0.054	0.037
	St. dev	0.137	0.176	0.098

Source: own elaboration (2024)

The most dominant negative emotion is contempt, with a mean of 0.684 globally, 0.807 in the presence of CRM, and 0.562 in the absence of CRM. The second strongest emotion is fear, which, like contempt, is higher in the presence of the company's CRM. This is followed by the emotions of anger and sadness, with sadness being the

only emotion that came out slightly stronger without feedback, which may indicate an emotional response to feeling unsupported or uninformed. The weakest expressed emotion is disgust, which is negligible compared to the other emotions. Given this, *we reject hypothesis H1, which claims that brand feedback mitigates the impact of negative emotions elicited by posts that contain negative content.*

Table 5. Regression analysis of the impact of negative emotions on consumer brand trust before and after brand feedback on negative UGC comment

	Relation	Standardized β	t-statistics	Sig.
Before feedback	Anger -> Trust	0.091	1.081	0.282
	Contempt -> Trust	-0.111	-1.313	0.191
	Fear -> Trust	0.151	1.799	0.074
	Sadness -> Trust	0.092	1.091	0.277
	Disgust -> Trust	0.079	0.939	0.349
After feedback	Anger -> Trust	0.059	0.692	0.490
	Contempt -> Trust	-0.051	-0.606	0.545
	Fear -> Trust	0.141	1.681	0.095
	Sadness -> Trust	0.110	1.300	0.196
	Disgust -> Trust	0.041	0.478	0.633

Source: own elaboration (2024)

Table 5 shows us the effect of emotion on trust before and after giving some form of feedback. Specifically, we focused on the effects of negative emotions, namely anger, contempt, fear, sadness, and disgust. Regarding the results of the regression analysis, before feedback was given, only one emotion showed a negative impact on trust, namely contempt; all the remaining emotions showed a positive impact on trust, with disgust having the weakest impact, followed by anger and sadness. However, none of the emotions showed a statistically significant impact. The more interesting finding highlighted to us is that of fear, which showed a borderline of statistical significance. Although not statistically significant, the finding in question deserves more attention. Regarding the reactions after the CRM comment was made, as with the non-CRM reactions, neither emotion showed a statistically significant effect on trust. However, we did detect differences, namely a reduction in the influence of anger, contempt and disgust, with fear retaining a slight positive influence. The impact of sadness on trust increased, which can be noticed by quantifying it with $\beta = 0.109606$. Although the β value indicates a potential subtle effect, overall, it is not strong enough to be considered statistically significant. We find that although negative emotions did not show a significant effect on trust in the situation without or with the presence of CRM, and thus *reject H2, we can see a subtle mitigation of the effect of negative emotions on trust after CRM, with the exception of sadness.*

Table 6. Regression analysis of the impact of negative emotion on intention to share a post before and after brand feedback on a negative UGC comment

	Relation	Standardized β	t-statistics	Sig.
Before feedback	Anger -> intention to share	-0.115	-1.362	0.175
	Contempt -> intention to share	-0.146	-1.743	0.084
	Fear -> intention to share	0.032	0.380	0.705
	Sadness -> intention to share	-0.086	-1.012	0.313
	Disgust -> intention to share	0.017	0.204	0.838
After feedback	Anger -> intention to share	-0.117	-1.391	0.166
	Contempt -> intention to share	-0.060	-0.709	0.480
	Fear -> intention to share	0.069	0.818	0.415
	Sadness -> intention to share	-0.105	-1.240	0.217
	Disgust -> intention to	-0.193	-2.321	0.022 *

Source: own elaboration (2024)

Overall, the emotion of disgust has the weakest effect on the intention to share, followed by fear, both of which show a positive effect. The emotions of anger, contempt and sadness showed a negative influence, with sadness showing the weakest influence. The impact of negative emotions on the intention to share a post before feedback was not statistically significant for any of the negative emotions. Of note is the emotion of contempt, which, although not statistically significant, would be well worth focusing on analyzing more in the future in terms of significance ($p=0.08$). Regarding the intention to share after the posting of the CRM by the company to the post, we can note that the emotion of disgust was statistically significant ($p=0.022$), which means that a higher level of disgust is significantly associated with a lower intention to share the content.

Table 7. Regression analysis of the impact of brand trust on the intention to share a post

Relation	Standardized β	t-statistics	Sig.
Trust -> Intention to share	0.336	4.206	4.64e-05 ***

Source: own elaboration, 2024

A strong, positive effect on the intention to share a post can be observed for trust, as can be seen in Table 7, where the results show that the higher the trust of users, the higher the likelihood that they will share the content. It is the low p-value ($p < 0.0001$) that suggests that trust can be considered a key factor that influences the intention to share content on social networks in online spaces.

Regression analysis provided key results regarding participants' emotional responses, their trust in the brand, and their intention to share. Hwang et al. (2018) reported that eye tracking provides valuable real-time information about consumers' potential and their visual behavior. The combination of statistical and eye-tracking techniques provides a comprehensive view of research participants' behaviors and responses, so we highlight selected results from eye-tracking for the stimulus we present. In the first step of analyzing the eye-tracking metrics, we focused on the first fixation in attention on the AOI Image (product) and AOI Text (all comments together without company feedback).

Table 8 shows the result of the Mann-Whitney U test in the differences in the duration of participants' average first fixation on AOI Text and AOI Product.

Table 8. Comparison of AOI Text and Product – Duration of First Fixation

	Mean	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)
AOI Text	155.51	21927.00	7965.000	0.004
AOI Product	127.49	17976.00		

Source: own elaboration, 2024

Table 8 provides interesting results, where the first fixation time was longer for the text itself (155.51 ms) than for the visual image/product (127.49 ms). The result comes out statistically significant at $p \leq 0.05$ significance level. In general, research tends to find that visual stimuli attract more attention and acquire longer first fixation times than text (Gheorghe, et al., 2023; Klein et al., 2020). On the other hand, textual information can be perceived as important if it is relevant or contains critical information that the participant needs to process in order to understand the context or meaning. This may prolong the first fixation on the text; as Henderson, Ferreira (1990) point out, textual stimuli require more cognitive resources for their full comprehension. When reading a text, the participant is expected to analyze the content, which can lead to a longer duration of first fixation when trying to process individual words and sentences.

In the case of comparing individual AOIs in a stimulus without and with feedback, we assume the presence of habituation. Habituation in neuromarketing refers to a psychological process in which repeated exposure to a particular stimulus leads to a reduced response to that stimulus (Bartkó et al., 2023). In the context of neuromarketing, it is a phenomenon that explains why consumers may initially respond strongly to an advertisement, product or content, but their interest decreases after repeated exposure to that stimulus. This process has a significant impact on advertising effectiveness and consumer engagement (Jankowski, 2021; Uribe-Bahamonde et al., 2019).

In our context, the stimulus was exposed twice in a row with a single change, whereas in the first exposure, there was no company feedback and in the second exposure, the same stimulus contained company feedback.

Table 9. Comparison of AOI with and without SV – fixation duration (ms)

	Mean	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)
AOI1 without SV	183.77	25911.00	3135.000	0.000
AOI1 with SV	91.22	12315.00		
AOI2 without SV	159.99	22558.00	6911.000	0.000
AOI2 with SV	119.58	16502.00		

Source: own elaboration, 2024

Table 9, unlike Table 8, presents the length of fixation per AOI. In both cases we observe statistically significant differences and this is probably due to the aforementioned habituation effect. Since the posts were presented twice in a row they did not meet the novelty condition and the participants already paid less attention to the individual post and the user's comment than in the first exposure.

An important aspect of the investigation is to compare the length of the fixation on the company's contribution, the user's comment and the company's feedback. In the above case, we consider the company's post and the user's comment observed for the first time in order to eliminate the habituation effect, which would make it impossible to compare the fixation length with the feedback seen by the participants for the first time.

Table 10. Comparison of individual AOI with SV alone – fixation duration (ms)

	Mean	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)
AOI1 vs SV	117.15	16518.00	6507.000	0.000
AOI SV	164.19	22822.00		
AOI2 vs SV	94.05	13261.00	3250.000	0.000
AOI SV	187.62	26079.00		

Source: own elaboration, 2024

In Table 10, which shows a comparison of the three areas of interest (AOIs): the company post (AOI 1), the negative user comment (AOI 2), and the company feedback (AOI SV), all results are statistically significant, indicating that the fixation length was longer on the company feedback than on the post itself and the negative comment. This result suggests that research participants paid more attention to the company's response to the negative comment than to the company's original post or the negative comment itself. The longer fixation on the feedback may indicate that respondents were interested in how the company responded to the criticism.

In the context of marketing and online communication, how a company responds to negative feedback is important because it affects brand perception, transparency, and credibility. Consumers may perceive a negative comment as something that requires attention, but the actual response of the company may be considered more important because it provides information about how the company handles negative situations and how it tries to repair its reputation (Baumeister et al., 2001). The company's response may be perceived as crucial for brand transparency and credibility. People prefer transparent and quick responses to negative comments, which may be the reason why more time was spent on this feedback (Yuana & Sutarmo, 2021).

Discussion and conclusions

The main aim of the research is to analyze how negative user-generated content (UGC) affect users' emotions, trust, and willingness to share content while also examining brands' strategies for responding to this content. Based on our results, we can conclude that although the impact of a negative comment (UGC) made by an Instagram platform user on a post depicted on the created account of a fictitious company, WatchWorld did not have a statistically significant impact on users' negative emotions after reading the post on the platform. Emotions such as contempt, fear, and anger showed the strongest intensity and variability; however, all three of these emotions showed higher variability and intensity after viewing the company's feedback in response to the user's negative UGC comment. This was followed by sadness, which was the only emotion that was stronger without the presence of the company's CRM comment, and the weakest emotion was disgust. Users experienced more negative emotions other than sadness when the company feedback to the negative UGC comment was present, which is also supported by the study of Bhandari and Rodgers (2018), who points out that the presence of company feedback to the negative comment, may exhibit signals that are perceived by users as a way of obscuring the product issue, thus suggesting that a company's response to a UGC user's negative comment may not have a mitigating effect on the emotions of the remaining users, but may amplify negative feelings. Below we will discuss the individual findings in more detail with respect to the hypotheses under investigation.

Trust

The results of our study showed that the effect of negative emotions in the presence of company feedback did not have a statistically significant effect on trust. However, changes before and after viewing the CRM post in response to the negative UGC comment suggest a subtle mitigation of the effect of emotion on trust. Just as Mian and Hattab (2013) say, interaction, communication and exchange of views deepen the relationship and trust is built on this. Consumers have trust in the brand, and hence, their willingness to buy increases (Habibi et al. 2014). trust is identified as one of the most significant barriers to e-commerce (Lin et al., 2017). Customer reviews, likes, comments, and communication with the seller build trust among potential customers (Sohn, Kim, 2020). Comments that are posted online have a positive impact, according to Weihong et al. (2022) have a great influence when it comes to consumers' purchase decisions, which is supported by the study of Bhandari and

Rodgers (2018), which showed that brand feedback has an indirect positive effect on increasing trust. No matter what type of issue is the subject of the negative UGC comment, it causes damage that is reflected in consumer trust (Wan et al., 2023). However, our results do not show the significance of the impact of negative emotions in the presence of feedback, which may be due to the fact that trust is influenced by various factors, with one of the reasons being the choice of the social network through which the post was published. Liu et al. (2022) point out that consumer behavior depends on trust in the online medium and the retailer. Since our company was fictional, it could have influenced consumers' trust in the company's published CRM comment.

Based on a thorough analysis, we can argue that effective digital marketing strategies must go beyond simply responding to negative comments. Companies should focus on building customer trust through personalized company responses and building and managing a strong community on social media.

Intention to share

The next objective of our study was to investigate the effect of negative emotions on the intention to share a published post after reading a negative UGC comment with and without social feedback. A statistically significant effect was found for the emotion of disgust, and this was after posting a company's feedback comment. Several authors have pointed out that negative feedback can damage a brand's reputation and influence consumer intention (Chevalier and Mayzlin, 2006; DeCarlo et al., 2007). Negative comment feedback can satisfy users' negative feelings, as Lin et al. (2017) point out consumers whose complaints have been defended and resolved alleviate their negative feelings. The study by Priluck and Lala (2009) also agrees with the statement that people are more satisfied after their problem is resolved, even if the failure has not occurred at all. This agrees with our results regarding the emotion of disgust, which came out as the only significant one. It was to resolve the situation that was mentioned in a negative comment about a fictional company's post published by an Instagram user, which increased the intention to share the post and decreased the users' feeling of disgust. However, the effect of emotion on the intention to share was not statistically significant in the remaining cases, which we attribute to the platform through which the post was published, as confirmed by the study of Bachleda et al. (2016), where they show a weaker impact of negative emotions on social media compared to other venues of posting a negative UGC paper in the online space, and this is compared to posting on review forums or directly on the company website.

Trust and feedback

The results of our study indicated that trust had a strong, positive effect on intention to share, which is supported by the study of Badenes-Rocha et al. (2021), where they pointed out that if a consumer has trust in a company, if they perceive the company to be honest and competent, this has an impact on the remaining users in their willingness to spread the positive word and their willingness to support its products which is in line with our results that testify that it is the users' trust in the company, i.e., in our case, trust towards the company with respect to the feedback, that led to a higher intention to share a given post further, thus confirming hypothesis H4. Feedback has a positive effect on trust in the company. Trust and purchase intentions increase in the presence of feedback, and according to Bhandari and Rodgers (2018), feedback has an indirect, positive effect on trust. Bigné et al. (2023) approached the implications of visual attention focused on negative UGC comments in posts and concluded that brand feedback reduces users' attention and focus on these comments. However, if they do focus on the comments in question, it reduces their trust and also their willingness to share, which is consistent with our results.

Emotions after reading the paper, eWOM in the case of Tuisku et al. (2017), were negative just after reading a paper published on an independent forum compared to the original store website. Comments posted on an independent forum cannot automatically be considered trustworthy; despite the untrustworthiness of the posted posts and the unprofessional nature of the information provided, reading these posts negatively affected participants' perceptions of the product. After the product evaluation, it was found that those who read the post on the independent forum rated the product lower, which attests to the results of our study, where negative emotions did not have as much influence as we predicted through sharing on the social network Instagram. If the post had been published on the company's website, we hypothesize that negative emotions might have shown a greater impact and could also be statistically significant in terms of the intention to share the post further. In our view, the weak effect of negative emotions on brand trust and intention to share has its origins in the choice

of product that was shared via the platform, namely smart watches, as pointed out by You et al. (2015) in their meta-analysis, where they revealed that the volume and valence elasticities of eWOM, where post and comment are included, vary and this varies depending on the nature of the product as well as the industry of the platform, as we mentioned above, based on which the effect of negative emotions on trust and intention to share that we originally predicted did not come out. Thus, our study findings highlight the importance of several factors compared to other studies, namely the nature of the product or the platform through which the post is shared.

Theoretical and Practical Implications

In the current digital era, social media, as a subset of digital marketing, represents a powerful tool for building relationships with consumers, interacting in real-time, and effectively influencing purchasing decisions, customer loyalty, and overall brand perception. Our study provides valuable insights into the intersection of negative emotions, brand trust, and digital marketing in the social media space. Our findings contribute to the literature on digital consumer behavior, online brand trust, and electronic word of mouth (eWOM) by expanding the understanding of how negative UGC influences emotional responses, trust, and content-sharing behavior on social media platforms. For service-based brands, such as those in tourism, financial services, healthcare, or telecommunications, the stakes are even higher due to the intangible nature of their offerings and the direct impact of customer experiences on brand perception.

Furthermore, the paper provides valuable practical implications. We recommend personalized and empathetic brand responses to negative UGC, through which companies should provide transparent solutions to the problems that have arisen. At the same time, use interactive customer engagement tools in the form of various surveys, Q&A, or live chats to strengthen consumer trust.

Limits and limitations of research

This study investigated how negative user comments affect brand perception (emotion, trust, and users' willingness to share content) among Generation Z. This study contributes to the understanding of the impact of negative emotions on brand perception. However, this research contains several limitations. First, the research sample included Gen Z but focused only on 18-25-year-olds; the research did not include younger respondents belonging to Gen Z.

We also take into account that some individuals belonging to Generation Z are still in the formative phase, a certain proportion is in the phase of entering the workforce, and only some of them are functioning in the sense of working with income (Benítez-Márquez et al., 2021). The entry into the market of young people belonging to this generation was greatly affected by the COVID-19 pandemic when unemployment among these young people grew (Sakdiyakorn et al., 2021). Second, the study sampled Slovak Gen Z respondents whose attitudes and behavior may differ from those of global Gen Z members. Future research could, therefore, focus on other parts of the world to gain a broader geographic and cultural perspective.

Another limitation is the focus on electronics only, specifically smartwatches, where people have just this kind of product in the online environment, according to Lin et al. (2003), high demands and expectations.

We also see the number of reviews as one of the limitations, as pointed out by Maslowska et al. (2017), who, in their study, investigated the impact of valence on consumer purchase behavior and intention and concluded that the impact of reviews also depends on the number of reviews. In our study, we only showed respondents one negative UGC comment, which was not relevant and thus did not have as much impact on the Instagram users who read the post as we expected. We recommend that in future experimental research of this form, we incorporate more comments, not only negative but also positive, where the power in each type of comment could be shown and as demonstrated, for example, by Wang et al. (2018), positive emotions have the greatest influence on consumer purchase decisions, followed by neutral and then negative emotions, which is reflected in our results.

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Funding: The authors gratefully acknowledge the financial support of the Ministry of Education, Research, Development and Youth of the Slovak Republic under Grant VEGA 1/0488/22 – *Research on Digital Marketing in the Area of Tourism with an emphasis on Sustainability Principles in a Post-pandemic Market Environment* and VEGA 1/0428/23 – *Research on Customers' Subconscious Reactions Using Eye-Tracking and Other Neuromarketing Tools*.

Data Availability Statement: More information and data can be obtained from the authors on a reasonable request.

Author Contributions: The authors contributed equally; they have read and agreed to the published version of the manuscript.

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