

Investigating the Impact of Emotional Contagion on Customer Attitude, Trust and Brand Engagement: A Social Commerce Perspective

Vasudevan Moorthy
Christ University, Bangalore, India
vasudevan30@gmail.com

Prabha Kiran
Westminster International University, Tashkent
prabhakiran10@gmail.com

Jayanta Banerjee
Amity University, Kolkata, India
jayanta.february@gmail.com

Krishna Kishore S V
Christ University, Bangalore, India
kkshr6336@gmail.com

ABSTRACT

Social Commerce networks are a powerful platform for spreading positive and negative emotional contagion, which is affecting users from different perspectives, i.e., psychology, attitude, buying decision. Emotional contagion is the phenomenon of having a person's emotions and behaviours directly trigger similar emotions or behaviour in other people. This research proposes a model to analyze the factors influencing emotional contagion that, in turn, impact consumer's attitudes, trust, and brand engagement. This study used a survey approach using a structured questionnaire. Primary data was collected from 174 social media users who shop online. The proposed model was tested using multiple regression analysis. The results demonstrated that effective content, visual or text, triggers customers' emotional contagion, influencing customer attitude and trust leading to brand engagement. The research study's findings can be used for deciding on content strategies of advertisements pertaining to social commerce.

Keywords: Emotional Contagion, Social Media Content, Emotion Contagion, Attitude, Trust, Brand engagement

1. INTRODUCTION

The evolution of technology and the internet have transformed the way of buying and selling a product rapidly from brick and mortar to online techniques in a blink. E-commerce is the new billion-dollar innovation that brings up rapid changes to how people shop. Following the path of evolution, every object gets replaced by a better substitute as time progresses. The viable replacement for E-commerce is turning out to be Social media (Social Commerce), which inherits the traits of the E-commerce websites like product description ideas and shapes them into a more user-friendly manner. The duality factor (socializing, commercial activities) gives social media an extra advantage over E-commerce websites. The buyer or the consumer finds social commerce more trustworthy than E-commerce websites. This is because social commerce websites offer more transparency than E-commerce websites. Selling through social media platforms allows a seller to create a good brand image and trust, provided the product has good quality, and it also helps the seller to monitor the brand easily. Electronic word of mouth (eWOM) is the number one attribute to spread information in the social community. Reviews, recommendations, online ratings, unboxing experience all create a reputation for the seller [1]. Social media helps sellers interact directly with their customers and help them evaluate their potential buyers' social habits to interact with them, thus providing their social community a genuine insight and, in turn, increasing sales. Social media is a potential ground for mining emotion, which helps the seller design the content required to attract potential buyers [2]. Although there are prior studies on social commerce and customer behaviour, there is a lack of extant literature highlighting the link between the seller-generated digital content and the emotional contagion of the customer. This study helps further explore the possible research question: What are the most effective forms of content (Visual, Audio, Word) that trigger emotional contagion? Whether there is an impact of emotional contagion on customer attitude, trust, and brand engagement? An extensive literature review was conducted to identify the constructs related to emotional contagion, customer attitude, trust, and brand engagement.

1.1 Research Objectives

- To determine the impact of social media content on emotional contagion.
- To identify the influence of emotional contagion on customer attitude and trust
- To deduce the relationship between emotional contagion and brand effectiveness
- To analyze the impact of customer attitude and trust on brand effectiveness

2. LITERATURE REVIEW

Social Commerce:

Social commerce concepts came into existence by combining the traits of both social media and e-commerce websites and are gaining popularity rapidly. The number of social media users is 3.48 billion as of 2019, and the number is growing day by day. Social media can be classified into seven different types: Social networking sites, forums, blogs, podcasts, wikis, content, communities, and micro-blogs. Blogs are journals containing visual, audio, and word media owned by bloggers. Bloggers used the platform to express their ideas and concepts and encourage the reader's involvement to enable a discussion. Forums are used for discussions similar to the blog but are not owned by anyone. The community member can initiate a conversation or discussion termed as threads. Twitter, Instagram, and Facebook are examples of social networking websites that allow users to form a community and socialize[3-4].

Social media turns out to be the most popular activity on the internet. The popularity of social commerce platforms is increasing due to people's increasing usage of social media. Social commerce indicates the use of social media to support users' participation in online business. Social commerce may be broadly categorized into two classes, social media with commercial features and e-commerce websites with provisions for social networking [5]. Social commerce is an innovative approach to customer-to-customer communications. Social commerce facilitates the exchange of consumer-generated content to help the buyers make more informed purchase decisions [6]. Emotional contagion is an essential aspect of social commerce, and they are intertwined together towards the study of customer engagement. In the present study, the indicators of emotional contagion are studied through three types of content, as discussed below.

Type of Content:

The type of content circulated creates a significant difference in the attention level of the consumers or social commerce platform users. The primary focus of the study is on three types, such as visual, audio, word type contents.

Content and Emotional contagion:

The consumers share their emotions and mood through the content shared on social commerce sites. Previous studies have contributed to the body of knowledge enhancing the understanding of sound and visual interferences. More studies on various contents and their roles in affecting emotion through multiple modes can be probed [7]. Such states of emotions can be transferred from person to person. This phenomenon is called emotional contagion, which affects the trust and attitude of internet users, resulting in actions [8]. Emotional contagion is primarily tested in a laboratory setting with people transferring all the positive and negative emotions to others [9]. Emotional contagion can be triggered by facial expressions, indirect human interactions, and observing other people's behavior in direct and indirect interactions.

Furthermore, emotional contagion can be triggered physiologically by synchronizing with the emotional state of others during human interactions. The present study can become the basis of research that further refines and compares the various techniques and tools' efficacy. The study identifies guidelines for research on consumer attitude through emotional contagion that can be especially interesting for academia and marketing practitioners. The findings are essential for field marketers interested in developing new individualized approaches in their commercial strategies and marketing in general [10]. Evidence shows that people share their emotions on social media. People are highly motivated to post emotional content during a time of crisis. Emotional contagion theory demonstrates how one person's emotions can provoke similar emotions and behaviors in other individuals [11]. An emotional climate results from emotional contagion that was because of emotion sharing via social media [12]. Based on these findings from previous literature, we hypothesized,

H₁: There is a significant relationship between content and emotional contagion

Visual Content:

Visual content refers to the advertisement or posts in a social commerce platform containing graphical representations or videos with the main content embedded in them [13]. Visual imagery is one of the prime mechanisms in inducing emotions. This paper recognized five additional mechanisms with visual content. Research studies also tested the effects of visual inputs and listeners' experience of music [14]. Visual effect with music triggers myriad emotions [15-16]. Emotion-related studies are already existing in the present context, and not sufficient studies have been conducted in the area of emotional contagion [17-18]. The visual content gained attraction rapidly because of websites like Facebook, Instagram, Twitter, Tumblr, Pinterest, etc. Photo-centric websites like these are the root cause of the popularity of

visual content. Facebook leads the other website regarding the number of users, but Instagram and Pinterest occupy second and third positions. Even though they are not the leader in terms of usage, both Instagram and Pinterest are narrowly focused on aspirational imagery associated with impulsive buying due to the pictured product. Domain-specific videos appeared to trigger more strong emotions. They further found that general pictures that are not connected to the music will not stimulate the emotions in an individual [19]. Research also found the relationship between validation of visual imagery and emotions as complex [20]. Content marketing highlights more engaging content to influence consumers [21].

H_{1c}: There is a significant relationship between visual content and emotional contagion.

Audio Content:

Audio contents can be of different forms ranging from direct vocal promotional advertisements to particular music, which triggers the brand image onto the customer's mind. Previous studies have collected evidence of music's relationship with emotions [22 – 24]. The audio content stimulates good brand recollection than the word type as listening to a particular message will be more pleasing than reading a hefty paragraph of description of the product [25] (Iyengar, 2010). Social commerce apps like Spotify allow the seller to advertise on their platform as it has millions of users worldwide. Music impact and role in emotion development needs to be probed. The advertisements are purely based on geography, and the advertisers use special music to make it sound pleasing to the listeners. Repetitive listening will engrave that brand into the customer's mind [26]. Mimicry triggers emotions in humans as well as non-humans [27].

H_{1a}: There is a significant relationship between audio content and emotional contagion.

Text Content:

Irrespective of what the content is, text content is the one that has to be accessed first in most of the websites to date. An attractive title refers to a product or a popular hashtag used to tag a particular specification all comes under the text content. Words used by instructors can influence the emotions of students. The study found students developed an emotional attachment. In many social media websites like Instagram, hashtags are used to tag the picture of products for easy identification. So even though the most popular method is the visual content type, the word content backs it up to make it more attractive, thus playing a significant role [28]. A study on emotional contagion using social media found that words were based on individuals' emotions as many individuals would like to put their point that is expected to

impact [29]. Corporates to trigger emotions using linguistic style in words [30]. Hence we hypothesized,

H_{1b}: There is a significant relationship between text content and emotional contagion.

Emotional Contagion leading to Attitude:

Attitude is one of the value functions that motivates the potential buyer to the buying process [31]. The behavior intentions and beliefs are the major constituents of a consumer's attitude. The social support theory clarifies how social relations in a community react when they receive data and how it impacts them to turn out to be. Many research studies have linked social support as the social value in an online community [32]. The customers' attitude is an attribute that contributes a lot to brand awareness and quick and impulsive buying. The Social support theory is used to back up the link between the customers' attitude and buying intention. Social support is considered an intangible source, but combining it with social media platforms adds strong value to it and, in turn, results in a change in consumers' attitude.

Consumers are becoming more aware and active in attitude-based actions towards brands. Attitude is being disturbed by emotional contagion effects prompting actions. The purchase decision could be the effect of rational thinking or the attitude change facilitated by the information exchange through the social community [33]. The Tri-component model and Social Support theory provide a better picture of linking attitude and customer buying intention. Strong customer engagement creates a favorable perception of the product and brand [34]. This finding was supported by previous studies also [35]. Customer attitude is a vital factor in understanding market behaviour [36]. Emotion development was consistently related to the attitude in the previous literature [37]. Previous studies linked emotional contagion to the attitude in an employee-based survey [38]. Hallinan & Brubaker, in their research, have linked emotional disturbances in Facebook users resulting in attitude development [39]. Hence, we hypothesized

H₂: There is a significant relationship between emotional contagion and customer attitude.

Emotional contagion and Trust:

Emotional connection with a brand of an individual leads to the development of trust [40], et al. (2012). Trust is essential for a brand to be known as credible. Emotional contagion at higher levels in familiar groups compared to non-familiar groups [41-42]. Du et al. (2014). Emotional disturbances were evident in familiar groups due to identical behaviours and

opinions. This emotional bonding was bridged by trust. This association is also supported by previous studies [43].

Trust plays a vital role in stimulating online purchases by customers. Customers can get necessary information through ratings, reviews, and feedback that in turn builds trust [44]. Trust is one of the key attributes which will lead to purchase. The effect of trust on purchase intention has been proven using studies, which is reflected in the social commerce websites as most of the social commerce transactions are made through online transactions. Trust reduces the uncertainty among the customer on how the whole purchase process will be and initiates more social commerce transactions [45]. Trust is one of the significant factors to establish successful long-term relationships. Customers share content and seek information on social media because they trust social media platforms. Customers will be more engaged in media to find satisfaction [46]. The trust factor can be linked to the relationship marketing theory, which explains the importance of reinforcing the relationship between the seller and buyer [47]. Previous studies linked product recommendation performance with trust development, leading to positive emotions [48 - 49]. Therefore, we hypothesized.

H₃: There is a significant relationship between emotional contagion and customer trust.

Emotional contagion leading to Brand Engagement:

Customer engagement in social commerce is a concept expected to provide power over consumer behavioural outcomes and brand loyalty. In general, customer engagement enhances the reaction between the consumer and the seller. Social media offers a sustainable and credible platform for doing so. Prior studies have indicated that customer involvement indicates the motivation level for the customer to remain loyal to the brand. Social media platforms like Instagram allow the customer to contact the seller directly. This enhances the involvement of customers with the brand resulting in loyalty. The seller's content and transparency on their brand ensure more customer engagement. The social media presence of customers can be a potential area that brands can explore to make customers engage with the brand. Brands can target a specific group of customers who can share the brand advocacy through social media. Studies also observed changes in emotions in social media users due to brand engagement-based campaigns [50]. In a research study, it was found that, people started developing engagement towards the brands that were giving a competitive advantage for companies [51]. Not all social media behaviours of customers are meaningful. Marketers should devise social media strategies that may result in meaningful engagement and behaviours with the brand [52].

Brand engagement as a marketing campaign concept is being used to create emotional attachment towards brands [53]. Previous literature also linked consumers' emotional responses based on brand success or failures [54]. Linkages of emotions, attitude and trust with brand engagement were adequately traced in previous literature. Therefore, we hypothesized

H₄: There is a significant relationship between emotional contagion and brand engagement.

H₅: There is a significant relationship between customer attitude and brand engagement.

H₆: There is a significant relationship between customer trust and brand engagement.

3. RESEARCH METHODOLOGY

3.1 Instrument Development

This research study has seven constructs: audio content, text content, visual content, emotional contagion, attitude, trust, brand effectiveness. A structured questionnaire was used to measure the above constructs, and the items included under those constructs were measured by using a five-point Likert scale. The questionnaire was developed from the modified scale used for measuring social commerce constructs [55]. The revised scales designed to measure the above constructs for emotional contagion, attitude, trust, and engagement were adopted from emotional contagion, attitude, trust, and engagement [36], [56-58]. The constructs were mainly focused on the richness and quality of audio, video, and text-based content.

3.2 Data Collection

Since the targeted respondents are social commerce users and it is more efficient to reach them online, an online survey was conducted for primary data collection [1]. The respondents were users of Facebook and Instagram who purchase online. The study is not confined to any specific brand or product category. A convenience sampling technique was used. The questionnaire was made in the google form, and the link was shared through e-mail and social media platforms. Researchers gathered 174 valid responses.

4. DATA ANALYSIS

4.1 Measurement Model

Researchers analysed a measurement model using an exploratory factor analysis (EFA) to identify the constructs. The exploratory factor analysis resulted in seven latent factors. The reliability of the constructs was tested using Cronbach alpha. KMO and Bartlett's test scores were used to assess internal consistency. Cronbach alpha values were under the acceptable threshold of 0.9, KMO, and Bartlett's test score exceeded 0.6. The model fitness was ascertained using multiple regression analysis.

4.2 Demographics

Several demographic cues are considered control variables to reduce exogenous threats to the research model. First, age is controlled because research shows that younger users are more susceptible to interpersonal influence than older users. Second, income deserves attention because the availability of disposable income should influence a person's impulsive consumption. Third, gender is included because the literature suggests that men and women often act differently regarding online social networking activities and impulsive purchase behaviors. Fourth, occupation may also prove to be an influential factor.

In a research study conducted by Nielsen in 2012, Most respondents were male representing 63.4% of the sample. 79.4% of respondents represent the age category of 17 – 25 years. Even though people older than 34 years are underrepresented in this research, the age distribution reveals that social media presence and engagement are driven mainly by 18–34. 55% of respondents were in the income category of 9 lacs per annum (family income) at the survey time. The majority of respondents are students representing 62.9% of total responses, followed by 26.9% are employees.

Further, 45.7% of the survey respondents spent 1 to 3 hours a day on social media. Significantly, 77.7% of the respondents were using social media for Entertainment. 75.4 % of the respondents made purchases seeing posts on Instagram.

4.3 Statistical Tests

The statistical measure used to analyse the data was Pearson's Chi-Square test, the most commonly used type of Chi-Square significance test to know if frequencies of

cases possessing some quality vary among levels of a given factor. The main goal of the Chi-Square test is to show whether there are significant differences between the populations being tested. In the present study context, it was evident from the study results that an association exists between brand engagement and gender. The brands have always tried various brand engagement techniques, and from the study, it has been highlighted that males and females engage with brands of different levels. The strategies must therefore be specifically designed for each group. The age groups also showed significant differences while engaging with the brand. The brand engagement strategies must consequently be inclined according to the age groups. Younger age groups have shown more engagement with the brand than the older age groups. Emotional contagion also varies with the different age groups. The study has highlighted other groups' attitudes towards the indicators of emotional contagion (visual, audio, and word content). Education does not play an essential role as emotional contagion comprises visual and text content, and it's more than sufficient for the development of emotional contagion.

The cosmetic side of website design is where content layout, typeface, colour, and other design elements appeal to web users and instil a behavioural intention to use the website for online transactions. Multiple elements have an impact on how well a website works. A retail website should provide accurate information on products and services. Poor clarity of web information resulted in several customer complaints or product returns [28]. The search effectiveness of a retail website is another important component in functionality [29-30]. People shop online for various reasons, one of which is convenience. As a result, online customers expect a retailer's website to provide quick access to information. An Internet shop's excellent order procurement quality indicates that their online order procurement procedure satisfies clients in terms of cosmetic and functional criteria.

In contrast to order procurement, the goal of order fulfillment is the timely delivery of an ordered item to the customer. Order fulfillment entails the actual delivery of the object through pre-organized supply chains. This offline process is entirely separate from online procurement, and high order procurement quality cannot guarantee tall order fulfillment quality. One significant order fulfillment quality factor is on-time delivery [4], [31-33]. After placing an order online, customers want to receive the order promptly. Delayed delivery increases their anxiety which leads to dissatisfaction. One

way to lessen the anxiety is an order tracking service which is another service factor in the order fulfillment process [30]. More fundamentally, on-time delivery requires product availability. Retailers showcase their products using their websites. The delivery delay is inevitable if specific merchandise on the website is unavailable when customers order the product. In this regard, product availability is an essential factor related to order fulfillment quality.

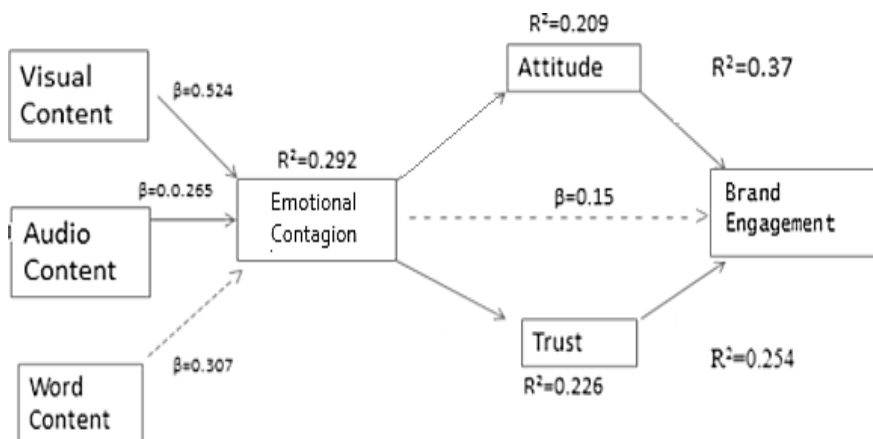
Table 1. Chi Square Hypotheses Testing

Sl. No.	Chi Square Hypotheses	P value (Chi Square)	Accepted/Rejected
1	There is significant association between Brand Engagement and Gender	0.001	Accepted
2	There is significant association between Brand Engagement and Age.	0.048	Accepted
3	There is significant association between Emotional Contagion and Age	0.008	Accepted
4	There is significant association between Emotional Contagion and Education	0.880	Rejected

The present study attempts to analyse the influence of emotional contagion on customer attitude and brand engagement. Audio content, visual content, and text content are major antecedents of emotional contagion, and the regression analysis was done to analyze the data.

Table 2. Results of Hypotheses Testing – Regression

Alternate Hypothesis	Effect	R square	Sig.	Decision
H1a: There is a significant relation between Audio content and Emotional contagion.	AC-->EC	0.7	0.118	Rejected
H1b: There is a significant relation between Word content and Emotional contagion.	WC-->EC	0.094	0.223	Rejected
H1c: There is a significant relation between Visual content and Emotional contagion.	VC-->EC	0.275	0.000	Accepted
H2: There is a significant relation between Emotional contagion and Attitude.	EC-->A	0.209	0.000	Accepted
H3: There is a significant relation between Emotional contagion and Trust.	EC-->T	0.226	0.000	Accepted
H4: There is a significant relation between Emotional contagion and Brand Engagement.	EC-->BE	0.15	0.043	Accepted
H5: There is a significant relation between Attitude and Brand Engagement.	A-->BE	0.37	0.000	Accepted
H6: There is a significant relationship between Trust and Brand Engagement.	T-->BE	0.254	0.000	Accepted

**Figure 1.** Model showing the impact of emotional contagion on attitude, trust and brand engagement

4.4 Regression Equation

The following equations were derived after the regression analysis that helped create predictive models for understanding the various relationships in terms of hypothesis developed and strength of the variables towards the development of the overall model.

$$\text{Emotional contagion} = 0.265 \text{ Audio Content} + 0.524 \text{ Visual Content}$$

The Regression equation shows that Visual content has a major impact on Emotional contagion, with a Beta value of 0.524. Respondents prefer Visual content as it proves to be most attractive and pleasing in terms of information shared.

$$\text{Attitude} = 0.209 \text{ Emotional contagion}$$

Emotional contagion highly affects the attitude of an individual towards Brands. Positive contagion towards a brand would make the peer-to-peer influence positive.

$$\text{Trust} = 0.226 \text{ Emotional contagion}$$

Emotional contagion also impacts an individual's trust towards the Brand content from the positive or negative experience.

$$\text{Brand Engagement} = 0.37 \text{ Attitude} + 0.254 \text{ Trust}$$

Attitude majorly impacts Brand effectiveness, one's positive or negative attitude towards a particular Brand content would lead to Brand effectiveness. The predictive models have clearly stated that the emotional contagion directly impacts trust and attitude by indirectly influencing brand engagement. The direct impact was, however insignificant.

5. FINDINGS AND DISCUSSION

The results of the study highlight that emotional contagion is largely influenced by visual content than audio and video content. This is in line with the study's findings conducted on emotional contagion and audio-visual communication [59]. The audio content and the text content follow, respectively and the significant presence of audio content is due to social media websites like Spotify, YouTube Music, etc. Even though the text type is far behind the visual and audio texts, its dependency cannot be excluded as the content creation and popularity are spread through the text types only. Therefore, a mixture of different content types with the right platform enhances people's

engagement with the brand. Emotional mining may help the advertiser to cluster the viewers into other groups and provide custom-tailored content. Repetitive and targeted advertisements or content for the targeted group increases brand engagement. The popular campaigns and content strategy have text types included in them, including the hashtag campaigns. The emotional factor has a great influence on the effectiveness of the content circulated. Custom categorized viewer-based contents provide better effectiveness, and the platform on which the content to be presented is also a deciding factor. The ultimate aim of improving the brand image or providing better brand effectiveness is achieved through the mentioned strategies. Understanding the value of the content created has a significant impact on the planning and designing of the content in the future. The effectiveness of the content is measured by the perceived image of the brand in the customers' minds. The initial analysis of the emotion generated by the content helps the sellers understand which type of content can trigger customer buying. Improper planning and content generation diminishes brand image. So, the proper analysis and balance of the content between text, audio, and visual have to be used to trigger positive emotion in the viewer, resulting in emotional contagion. The results also emphasize that emotional contagion impacts both customer attitude and trust. Customer trust is highly affected by emotional contagion. Because of collaborative information sharing in social media content, trust is developed among the customers resulting in collaborative buying decisions. The findings are similar to the study conducted on decision-making in social commerce platforms [60]. Proper scheduling and patterning of the content help the seller bring out the best possible outcome for the brand. The results showcased no direct relationship between emotional contagion and brand engagement, whereas emotional contagion indirectly impacts brand engagement by influencing the customer attitude and trust. The customer engagement factor encourages a commitment between the customer and seller, which results in a better association with the brand, adding to repeat purchases and a loyal customer base.

6. MANAGERIAL IMPLICATIONS, LIMITATIONS AND FUTURE SCOPE OF RESEARCH

6.1. Managerial Implications:

The study proved that visual audio and video content trigger the emotions inside an individual. Similar findings were observed by [61]. The study results clearly state

that visual content has the most effect on contributing to emotional contagion. The emotional mining techniques help the content creator understand the type of content to be created to promote the brand image. The study cannot entirely rely on a single type of content in a practical situation. The content used should be a mix of different categories, namely visual, audio, and text. The effectiveness relies entirely on hitting the emotional spot of the viewer; the type of social media used by the viewer at the time also has a great impact on the kind of content the advertiser or seller uses. Entirely relying on the visual content for websites like Spotify is a wrong decision and will affect the efficiency of the content. So custom targeted advertisements or content have to cover both the customer or viewer and the platform as an attribute.

6.2 Limitations:

Emotional contagion is a social transmission in which a group's emotions and behaviour spread spontaneously. The present study focuses on social commerce platforms and their effect on emotion contagion behaviour. This study thus investigates a particular niche area through which communication occurs. The study is further limited in exploring the influence of emotional contagion on only customer attitude and trust.

Although the literature has revealed that these two factors are of prime importance, future studies can be encouraged to include elements like individual and interpersonal factors influencing group behaviour. Social commerce platforms have made it easier to see others' purchasing patterns, raising the chances of commencing herd behaviour. This topic was not explored in this study and could be investigated in future research.

6.3 Future scope of research:

More emotional contagion related studies can be conducted in different sectors and sector-specific marketing communications and campaigns. The intervention of more contextual variables like high involvement purchases, product life cycle stages can be inspected. All paths can also be checked for moderation by demographic variables. Small experiments on mediation models can also be planned. Emotional contagion is an exciting term and is being explored in the domains of cognitive psychology, philosophy. Visual imagery can also be explored in many ways, such as memory. Does more emotional involvement lead to stronger memory can also be probed. More emphasis can also be provided to explore the area of episodic memory.

Studies can also link music in retail atmospherics, sensory elements, and emotional involvement. Also, the soothing effect on clinical patients by music triggering emotions can also be probed in the healthcare sector. Previous research argues that we need not test the linkage of visual imagery with emotional contagion. It further stated that audio content could also trigger visual imagery leading to emotion development and later emotional attachment [62]. More studies can also be conducted validating cross-sectoral applications and findings.

7. REFERENCES

- [1] Y. Chen, S. Fay, and Q. Wang, "The role of marketing in social media: How online consumer reviews evolve," *J. Interact. Mark.*, vol. 25, no. 2, pp. 85–94, 2011.
- [2] H. H. A. H., C. N. Wickramasinghe, and R. S., "The influence of social commerce on consumer decisions", *The international technology management review*, vol. 7, no.1, pp. 47–58, 2018.
- [3] J. Wong.(2021, Dec. 03). The latest E-commerce trend: What you need to know about social commerce [Online]. Available: <https://www.forbes.com/sites/forbescommunicationscouncil/2021/12/03/the-latest-e-commerce-trend-what-you-need-to-know-about-social-commerce/?sh=3dded660753b>
- [4] J. Laing. (2021, Jan. 12). What is social commerce? Definition, examples, stats [Online]. Available: <https://www.the-future-of-commerce.com/2021/01/12/what-is-social-commerce/>
- [5] J. Qiu, Y. Li, and Z. Lin, "Detecting social commerce: an empirical analysis on yelp," *Journal of Electronic Commerce Research*, vol. 21, no.3, pp. 168–179, 2020.
- [6] X. Wang, X. Lin, and M. K. Spencer, "Exploring the effects of extrinsic motivation on consumer behaviors in social commerce: Revealing consumers' perceptions of social commerce benefits," *Int. J. Inf. Manage.*, vol. 45, pp. 163–175, 2019.
- [7] Z. Eitan, "Musical Connections. The Routledge Companion to Music Cognition, New York : Routledge, 2017.
- [8] C. Herrando and E. Constantinides, "Emotional contagion: A brief overview and future directions," *Front. Psychol.*, vol. 12, 712606, 2021.
- [9] A. D. I. Kramer, J. E. Guillory, and J. T. Hancock, "Experimental evidence of massive-scale emotional contagion through social networks," *Proc. Natl. Acad.*

- Sci. U. S. A.*, vol. 111, no. 24, pp. 8788–8790, 2014.
- [10] R. W. Doherty, "The emotional contagion scale: a measure of individual differences," *J. Nonverbal Behav.*, vol. 21, no. 2, pp. 131–154, 1997.
 - [11] G. Isabella and V. A. Vieira, "The effect of facial expression on emotional contagion and product evaluation in print advertising," *RAUSP Manag. j.*, vol. 55, no. 3, pp. 375–391, 2020.
 - [12] S. Steinert, "Corona and value change. The role of social media and emotional contagion," *Ethics Inf. Technol.*, vol. 23, no. S1, pp. 1–10, 2020.
 - [13] A. T. Stephen and O. Toubia, "Deriving value from social commerce networks," *J. Mark. Res.*, vol. 47, no. 2, pp. 215–228, 2010.
 - [14] P. N. Juslin, S. Liljeström, D. Västfjäll, G. Barradas, and A. Silva, "An experience sampling study of emotional reactions to music: listener, music, and situation," *Emotion*, vol. 8, no. 5, pp. 668–683, 2008.
 - [15] M. G. Boltz, B. Ebendorf, and B. Field, "Audiovisual interactions: The impact of visual information on music perception and memory," *Music Percept.*, vol. 27, no. 1, pp. 43–59, 2009.
 - [16] M. E. Goldberg, A. Chattopadhyay, G. J. Gorn, and J. Rosenblatt, "Music, music videos, and wear out," *Psychol. Mark.*, vol. 10, no. 1, pp. 1–13, 1993.
 - [17] J. Bowen, "Emotion in the classroom: An update," *To improve academy.*, vol. 33, no. 2, pp. 196–219, 2014.
 - [18] A. Vassiou, A. Mouratidis, E. Andreou, and K. Kafetsios, "Students' achievement goals, emotion perception ability and affect and performance in the classroom: a multilevel examination," *Educ. Psychol.*, vol. 36, no. 5, pp. 879–897, 2016.
 - [19] M. Sunday, R. W. McGugin, and I. Gauthier, "Domain-specific reports of visual imagery vividness are not related to perceptual expertise," *Behav. Res. Methods*, vol. 49, no. 2, pp. 733–738, 2017.
 - [20] R. A. Day and W. F. Thompson, "Measuring the onset of experiences of emotion and imagery in response to music," *Psychomusicology*, vol. 29, no. 2–3, pp. 75–89, 2019.
 - [21] K. Kajtazi and J. Zeqiri, "The effect of e-WOM and content marketing on customers' purchase intention," *Int. j. Islam. mark. brand.*, vol. 5, no. 2, p. 114, 2020.
 - [22] E. Eldar, O. Ganor, R. Admon, A. Bleich, and T. Hendler, "Feeling the real world: limbic response to music depends on related content," *Cereb. Cortex*, vol. 17, no. 12, pp. 2828–2840, 2007.
 - [23] J. M. Geringer, J. W. Cassidy, and J. L. Byo, "Nonmusic majors' cognitive and

- affective responses to performance and programmatic music videos," *J. Res. Music Educ.*, vol. 45, no. 2, pp. 221–233, 1997.
- [24] B. W. Vines, C. L. Krumhansl, M. M. Wanderley, and D. J. Levitin, "Cross-modal interactions in the perception of musical performance," *Cognition*, vol. 101, no. 1, pp. 80–113, 2006.
 - [25] R. Iyengar, C. Van den Bulte, and J. Y. Lee, "Social contagion in new product trial and repeat," *Mark. sci.*, vol. 34, no. 3, pp. 408–429, 2015.
 - [26] L. Taruffi, C. Pehrs, S. Skouras, and S. Koelsch, "Effects of sad and happy music on mind-wandering and the Default Mode Network," *Sci. Rep.*, vol. 7, no. 1, 14396, 2017.
 - [27] E. Palagi, A. Celeghin, M. Tamietto, P. Winkielman, and I. Norscia, "The neuroethology of spontaneous mimicry and emotional contagion in human and non-human animals," *Neurosci. Biobehav. Rev.*, vol. 111, pp. 149–165, 2020.
 - [28] B. N. Frisby, "The influence of emotional contagion on student perceptions of instructor rapport, emotional support, emotion work, valence, and cognitive learning," *Commun. Stud.*, vol. 70, no. 4, pp. 492–506, 2019.
 - [29] S. Steinert and O. Friedrich, "Wired emotions: Ethical issues of affective brain-computer interfaces," *Sci. Eng. Ethics*, vol. 26, no. 1, pp. 351–367, 2020.
 - [30] M. T. Lee and C. Theokary, "The superstar social media influencer: Exploiting linguistic style and emotional contagion over content?," *J. Bus. Res.*, vol. 132, pp. 860–871, 2021.
 - [31] A. Gruzdz, S. Doiron, and P. Mai, "Is happiness contagious online? A case of twitter and the 2010 winter Olympics," in 2011 44th Hawaii International Conference on System Sciences, Kauai, HI, USA, 2011, pp. 1530-1605.
 - [32] J. Bollen, B. Gonçalves, G. Ruan, and H. Mao, "Happiness is assortative in online social networks," *Artif. Life*, vol. 17, no. 3, pp. 237–251, Summer 2011.
 - [33] P. Gross and K.-P. Wiedmann, "The vigor of a disregarded ally in sponsorship: Brand image transfer effects arising from a cosponsor: The vigor of a disregarded ally in sponsorship," *Psychol. Mark.*, vol. 32, no. 11, pp. 1079–1097, 2015.
 - [34] D. Sahoo and S. S. Pillai, "Role of mobile banking servicescape on customer attitude and engagement: An empirical investigation in India," *Int. J. Bank Mark.*, vol. 35, no. 7, pp. 1115–1132, 2017.
 - [35] F. Boronczyk and C. Breuer, "Brand-related feelings and sponsor attitude formation," *Int. J. Sports Mark. Spons.*, vol. 21, no. 3, pp. 513–526, 2020.
 - [36] N.-H. Um, "Antecedents and consequences of consumers' attitude toward social commerce sites," *J. Promot. Manag.*, vol. 25, no. 4, pp. 500–519, 2019.
 - [37] Y. H. Lee, H. H. Kwon, and K. A. Richards, "Emotional intelligence, unpleasant

- emotions, emotional exhaustion, and job satisfaction in physical education teaching," *J. Teach. Phys. Educ.*, vol. 38, no. 3, pp. 262–270, 2019.
- [38] P. Banerjee and M. Srivastava, "A review of emotional contagion: Research propositions," *J. Manag. Res.*, vol. 19, no. 4, pp. 250–266, 2019.
- [39] B. Hallinan, J. R. Brubaker, and C. Fiesler, "Unexpected expectations: Public reaction to the Facebook emotional contagion study," *New Media Soc.*, vol. 22, no. 6, pp. 1076–1094, 2020.
- [40] S. M. C. Loureiro, K. H. Ruediger, and V. Demetris, "Brand emotional connection and loyalty," *J. Brand Manag.*, vol. 20, no. 1, pp. 13–27, 2012.
- [41] J. Berger and K. L. Milkman, "Emotion and virality: What makes online content go viral?," *GfK mark. intell. rev.*, vol. 5, no. 1, pp. 18–23, 2013.
- [42] S. Du, Y. Tao, and A. M. Martinez, "Compound facial expressions of emotion," *Proc. Natl. Acad. Sci. U. S. A.*, vol. 111, no. 15, pp. 1454–1462, 2014.
- [43] J. Hasford, D. M. Hardesty, and B. Kidwell, "More than a feeling: Emotional contagion effects in persuasive communication," *J. Hettiarachchi. Mark. Res.*, vol. 52, no. 6, pp. 836–847, 2015.
- [44] I. B. Yahia, N. Al-Neama, and L. Kerbache, "Investigating the drivers for social commerce in social media platforms: Importance of trust, social support and the platform perceived usage," *J. Retail. Consum. Serv.*, vol. 41, pp. 11–19, 2018.
- [45] N. S. Coulson, "Receiving social support online: an analysis of a computer-mediated support group for individuals living with irritable bowel syndrome," *Cyberpsychol. Behav.*, vol. 8, no. 6, pp. 580–584, 2005.
- [46] H. Chahal and A. Rani, "How trust moderates social media engagement and brand equity," *J. Res. Interact. Mark.*, vol. 11, no. 3, pp. 312–335, 2017.
- [47] E. Prochazkova and M. E. Kret, "Connecting minds and sharing emotions through mimicry: A neurocognitive model of emotional contagion," *Neurosci. Biobehav. Rev.*, vol. 80, pp. 99–114, 2017.
- [48] T. Matsui and S. Yamada, "Designing trustworthy product recommendation virtual agents operating positive emotion and having copious amount of knowledge," *Front. Psychol.*, vol. 10, p. 675, 2019.
- [49] C. Herrando, J. M. Jiménez, E. Constantinides, J.-W. van 't Klooster, and P. J. H. Slijkhuis, "Emotional contagion in social commerce: A neuromarketing experiment," in XXXI Congreso de Marketing, Cáceres, Spain, 2019.
- [50] L. D. Hollebeek and T. Chen, "Exploring positively- versus negatively-valenced brand engagement: a conceptual model," *J. prod. brand manag.*, vol. 23, no. 1, pp. 62–74, 2014.
- [51] P. Harrigan, U. Evers, M. Miles, and T. Daly, "Customer engagement with

- tourism social media brands," *Tour. Manag.*, vol. 59, pp. 597–609, 2017.
- [52] R. VanMeter, H. A. Syrdal, S. Powell-Mantel, D. B. Grisaffe, and E. T. Nesson, "Don't just 'like' me, promote me: How attachment and attitude influence brand related behaviors on social media," *J. Interact. Mark.*, vol. 43, pp. 83–97, 2018.
- [53] S. Kumar, T. Roshni, and D. Himayoun, "A comparison of Emotional Neural Network (ENN) and Artificial Neural Network (ANN) approach for rainfall-runoff modelling," *Civ. Eng. J.*, vol. 5, no. 10, pp. 2120–2130, 2019.
- [54] K. Hill Cummings and J. A. Yule, "Tailoring service recovery messages to consumers' affective states," *Eur. J. Mark.*, vol. 54, no. 7, pp. 1675–1702, 2020.
- [55] Z. Sheikh, L. Yezheng, T. Islam, Z. Hameed, and I. U. Khan, "Impact of social commerce constructs and social support on social commerce intentions," *Inf. technol. people*, vol. 32, no. 1, pp. 68–93, 2019.
- [56] J. Chen and X.-L. Shen, "Consumers' decisions in social commerce context: An empirical investigation," *Decis. Support Syst.*, vol. 79, pp. 55–64, 2015.
- [57] I. B. Yahia, N. Al-Neama, and L. Kerbache, "Investigating the drivers for social commerce in social media platforms: Importance of trust, social support and the platform perceived usage," *J. Retail. Consum. Serv.*, vol. 41, pp. 11–19, 2018.
- [58] A. H. Busalim, F. Ghabban, and A. R. C. Hussin, "Customer engagement behaviour on social commerce platforms: An empirical study," *Technol. Soc.*, vol. 64, no. 101437, p. 101437, 2021.
- [59] S. Holtzman, D. DeClerck, K. Turcotte, D. Lisi, and M. Woodworth, "Emotional support during times of stress: Can text messaging compete with in-person interactions?," *Comput. Human Behav.*, vol. 71, pp. 130–139, 2017.
- [60] G. Lăzăroiu, O. Neguriță, I. Grecu, G. Grecu, and P. C. Mitran, "Consumers' decision-making process on social commerce platforms: Online trust, perceived risk, and purchase intentions," *Front. Psychol.*, vol. 11, p. 890, 2020.
- [61] L. Taruffi, C. Pehrs, S. Skouras, and S. Koelsch, "Effects of sad and happy music on mind-wandering and the Default Mode Network," *Sci. Rep.*, vol. 7, no. 1, p. 14396, 2017.
- [62] M. B. Küssner and T. Eerola, "The content and functions of vivid and soothing visual imagery during music listening: Findings from a survey study," *Psychomusicology*, vol. 29, no. 2–3, pp. 90–99, 2019.