ORCA – Online Research @ Cardiff

Consumer Response Towards Social Media Advertising: Effect of Media Interactivity, its Conditions and Underlying Mechanism

ABSTRACT

Marketers increasingly use social media platforms as a promotion channel, and doing~~in~~ this, they prefer highly interactive social media because it allows ~~the~~ consumers to socialize and network better. However, in this media, attention is often restricted towards primary purpose only as a result of the level of interactivity, thereby affecting consumer response towards the advertisement(ad). In this setting, the study analyzes the role of media interactivity and the effects it has on the reaction of customers towards the social media ad. Further, the study also introduces the conditional role of message relevant aspects, such as message vividness and anthropomorphism, and examines the intervening role of flow experience. Results from a between-subjects study indicate that interactivity hurts the consumer ad reactions. It also suggests that the right use of message relevant aspects can mitigate these adverse effects. Thus, the study makes a significant contribution to the literature and practice regarding the effects of social media interactivity which is relatively recent and has been overlooked by past researchers.

Keywords: Social media, interactivity, vividness, anthropomorphism, attention, recall, recognition.

1. Introduction

For nearly two decades, social-media networks (e.g., Facebook, Twitter) have increasingly been utilized by marketers to advertise brands (Arora et al., 2019; Lee & Hong, 2016). As of January 2020, ~~in the world,~~ around ~~the world~~ 4.54 billion people use the internet, with~~and in this,~~ approximately ~~round~~ 3.8 billion people engage actively in social media, reaching a penetration level of about 49 per cent (Digital, 2020). It reported that over 90 per cent of brands use more than one social media network for advertising, and companies ~~have been~~are proactive in using social media strategies and tactics to increase consumption of their brand (Lee & Hong, 2016). More importantly, the integral role social media plays in the life of consumers has led to ~~the~~ marketers extensively depend~~ed~~ing on the platform to market their offerings.

In this medium, what marketers/advertisers find critical and challenging is directing consumer attention and response towards the advertisement (ad). This research approaches this aspect from a different perspective, that is, moving away from traditional media to a new media outlet which helps marketers to attract the customers towards a platform which allows a high level of realism (Coyle & Thorson, 2001). One of the ways by which the new media (e.g., social media) exert the level of realism is through interactivity. Steuer (1992) defines interactivity as "*the extent to which users can participate in modifying the form and content of a mediated environment in real-time*" (p. 84). The level of interactivity exerted by social media is the key feature of all new media platforms, that not only change the way messages are being communicated but also how they influence opinions and attitude (Fortin & Dholakia, 2005). It plays a critical role in influencing user behaviour (Wang & Sundar, 2018). This~~It~~ is because, interactivity facilitated by the medium allows the user to customize the appearance of the communication interface (cosmetic customization), make alterations to task-oriented utility tools on the interface (functional customization), and manage t

information either filtering or through the creation of original content (Sundar et al., 2012). ~~This~~This~~It~~ is the evolving feature of new media and represents the quality of evolving communication media (Rafaeli, 1990). Social media as a platform carries interactivity features that determine the extent to which the user of this medium uses and controls the form and content of communication in the real-time (Lin & Chang, 2018). For example, ~~the~~ users ~~of this medium~~ interact with their social environment through content development, creation, sharing, posting their messages, and reading the messages posted by others. Thus, the interactivity ~~facilitated by this medium~~ facilitates the users to present themselves, as well as to have informational exchanges among the social groups in real-time (Zhao & Lu, 2012).

Though, interactivity of the social media platform directs the users' information processing towards the primary communication objective of socialization, a higher level of interactivity in this medium work adversely. That is, it may result in deteriorating the information processing of the secondary communication of the advert presented ~~in this medium. This is~~ because of the interactivity intended ~~in this medium~~ to facilitate the primary objective of socialization. Therefore, the effectiveness of adverts is threatened by platform usage and directing the attention only on the ~~main~~ task of socialization. Although research has provided an adequate understanding of the importance of interactivity in general advertising contexts (e.g., Chen et al., 2005; Liu & Shrum, 2009; Sicilia et al., 2005; Sundar et al., 2014), ~~the~~ limited research ~~that~~ analyses the effect of interactivity in the social media context, especially the effect it has on consumer responses towards the ad which is presented in these media. Besides this, clarity is lacking regarding how it impacts consumer responses towards the advert, which is presented in the social media with varying levels of interactivity. ~~Thus, in this~~This study ~~, we~~ aims to~~attempt to~~ answer the following research questions:

RQ1: Does the level of media interactivity (high vs. low) play any role in influencing the consumers' attention and memory of the advertised brand/message?

RQ2: If the media interactivity hurts the attention and memory of the ad presented in the media, then what management options exist to promote more considerable ad brand/message attention and memory without reducing the interactivity exposure _____ -level –of the consumers in social media?

Managing the adverse effect of media characteristics of interactivity involves considering the message mechanics to elicit better message attention and memory among social media users. TIn this study, firstly , we considers message vividness as a balancing factor which balances the audience attention between the primary communication (socialization) and the secondary elements (ad/brand). Following Steuer (1992), we consider message vividness as the message mechanics, and it denotes the extent to which the message contains formal features; that is, how a message present in the medium delivers information to the senses of the user. We presume that applying the perspective of the vividness of the ad presented in the interactive social media elicit message richness by evoking sensorial appeal to the multiple senses of the person who is observing the ad presented in the media (Steuer, 1992). Consequently, we presume that within the same medium, the level of interactivity may vary. The variation in the level of interactivity diverts the users' attention from the primary communication of social interaction to the message presented in social media. For example, higher interactive media direct more attention towards the primary mode of socialization than that of the message attention. In this setting, facilitating message vividness considers the level of interactivity exerted by the medium and direct the users' attention back to the message embedded in this platform. Therefore, us, we posit the third research question as:

RQ3: Does message vividness work as a balancing factor to restore the customer attention towards the brand/message presented in a highly interactive social media?

The extant literature states that in social media settings, if consumers who are cognitively ready to see the message/brand presented in the media as a relationship partner, then they have a higher motivation to interpret the same and thus enhancinge their perception towards the exposed message/brand (Hudson et al., 2016). In this line, Puzakova et al. (2013) stated that anthropomorphizing the message/brands directs the consumers to see the message/brand as "*actual human beings with various emotional states, mind, soul, and conscious behaviours that can act as prominent members of social ties*"(pp. 413), and it can elicit better message attention in social media settings (Tuškej & Podnar, 2018). Adding human elements directs the users to consider the message as part of a socialization process, and feel better connected to the message. Thereforeus, we propose a fourththird research question:

RQ4: Does anthropomorphizing the brand/message presented in highly interactive media work favourably in creating the users' message attention?

Besides, the extant literature stated that the level of interactivity and vividness could direct the user to create a flow experience concerning the medium (Hoffman & Novak, 1996; Novak et al., 2000), which work as a critical intervening mechanism in creating customer outcomes. Thise flow ias a state which is facilitated by interactivity, the intrinsic enjoyment, loss of self-consciousness, and self-reinforcement (Novak et al., 2000). Therefore, in support ofwith prior literature (e.g., Hoffman & Novak, 1996; Novak et al., 2000), we posit that in social media settings, the facilitation of the above-said factors, such as interactivity, vividness and anthropomorphism can elicit users' flow experience, which is critical in generating the message related outcomes.

TConsidering the reach and popularity of social media as a medium of advertising, and a platform to provide a higher level of social interactions suggestsing the need for a study to provide answers to ourthe stated research questions. Precisely, providing answers to these

questions will deliver accurate directions for social media marketers and advertisers, and also help them to achieve better communication outcomes amongst the audience.

2. Literature Review and Hypothesis Formulation

2. 1. Social Media Interactivity

In the settings of advertisement and media communications, interactivity strives to provide end-users with the avenue to communicate effectively as either senders or receivers with other users in real-time to access or to deliver information on an on-demand basis where the timing, content, and sequence of the communication is in the control of the end-user (Fortin & Dholakia, 2005). In line with Hoffman and Novak (1996), who conceptualized interactivity in two different perspectives, the first user-to-user interactivity focused on the interpersonal communication perspective and the responsiveness to the content posted by a user (user to user), and the other perspective of user-to-system (technology/medium interactivity), which focused interactivity as the media characteristics. Sundar et al. (2015) considered interactivity in a broad perspective, and the authors considered the concept of the interactivity of digital media asis a source feature, media feature, and message feature (Sundar et al., 2015). The media feature of this study allows users to manipulate the functionalities of social media in various modes, for example, zoom in certain parts, search, scroll down, and customize appearances. Interactivity facilitates users to participate in a variety of activities such as the creation of portals or pages, expressing feelings, and opinions and even customizinge the information using various media features. There are many benefits of the media feature of interactivity, which allow the user to have reciprocal and synchronous interactions (Gu et al., 2013), involvement (Sicilia et al., 2005), sense of control, and choice of the media (Song & Bucy, 2008). Social media carries this compelling media interactivity, allowing consumers to fully engage in the communications strategy (Oh & Sundar, 2015),

~~and~~ directing them to make the full commitment of their cognitive resources in processing information (Oh & Sundar, 2015).

Past researchers noted the importance of media interactivity in different media settings, however, there is little understanding delve into social media (e.g., Lin & Chang, 2018). In this setting, this research presumes that there is a need to analyze the effect of interactivity in social media ad settings, ~~because of~~due to the benefits of social media as a communication platform in comparison with traditional media. Firstly, the perceived balance facilitated~~allowed~~ by ~~the~~ social media in terms of information sharing and acquisition through its interactive features allows the users of the medium to engage more ~~into~~ with this platform (Zhao & Lu, 2012). Whereas in traditional media, the consumer depends on the~~is~~ medium purely for information acquisition/entertainment, and the absence or partial interactivity features allowed by this medium restricts the users~~s~~ to share their information/entertainment.

Secondly, the interactivity in the form of user-to-user interaction facilitated by ~~the~~ social media enables the users of this medium to select, search, and edit information i~~o~~n a customized manner (Wei et al., 2015). This form of user-to-user interactivity also increases the effectiveness of absorbing the information (Hsu et al., 2015). However, this mode of user-to-user interactivity is not accessible ~~llowed~~ in traditional media platforms. ~~Hence~~Therefore, the form of interactivity facilitated by social media may create differences in the effectiveness of communication and its absorption.

Finally, the interactivity facilitated by ~~the~~ social media platform~~s~~ may also direct the users to control the medium by modifying the content and its form in real-time (Steuer, 1992; Zhang et al., 2014), which~~and it~~ is a~~the~~ critical feature determining the communication quality of the medium (Lowry et al., 2009). However, in traditional media, the user has no control over the presented content, and they can only view the contents that are sourced, developed and controlled by the marketers. Thus, interactivity driven control facilitated by

social media may provide superior communication in comparison with traditional communication platforms.

In this study, in line with prior literature (e.g., Lin & Chang, 2018), we propose that media interactivity creates a heightened level of visceral user experience, by reducing the gap between the real and mediated environment. It causes an increase in the processing of the resources related to the primary purpose of social interaction. For example, Soares et al. (2012) argued that the interactivity facilitated by social media plays a pivotal role in strengthening the primary focus of building relationships, and it happens through the increase in speed and convenience of interacting with their social group. Moreover, the extant literature in social media settings also argues~~d~~ that this platform contains ma~~n~~y unique technical features that direct the users to interact with others generating~~and hence~~ socialization focused~~more~~ attention ~~will be on socialization~~ (Zhang et al., 2014). Thus, media with a highly interactive environment (e.g., social media) direct~~s~~ the user to a more intuitive and natural platform facilitating the absorption of cognitive understanding of the primary resources. The~~is~~ increased level of cognition of ~~the~~ primary communications increases due to the high level of modality interactivity and directs the focused absorption of the advertisement content and dissociation towards the peripheral content (Oh & Sunder, 2015). Agarwal and Karahanna (2000) highlighted the importance of cognitive absorption on successful media communications strategies, and suggest that the cognitive absorption is "*a state of deep involvement*…and *the experience of total engagement where other attentional demands are, in essence, ignored*" (p. 673).

It is noted that cognitive absorption that the user develops towards the primary communication activity helps the user to process the information that is related to the main activity, while it limits the impact of the peripheral elements (Reychav & Wu, 2015). This~~It~~ is also supported by Limited Capacity Theory (Lang, 2000), which suggests that if the user uses

more resources for encoding the primary activity, there would be fewer resources left over for processing of the related peripheral activities. For example, in a social media setting if the media facilitates a high level of interactivity, then the consumer allocates more resources for the processing of information related to the primary activity of social interaction. ThisIt might result in incomplete processing of information associated with the secondary activity, i.e., processing of the ad. This happens because social media facilitates high media interactivity through various means and it dominates by utilizing resources from the encoding of the primary activity of social interaction and leading to a reduction in the processing of the secondary information of advertisement processing. MoreoverFurthermore, in align with past literature (e.g., Hsu et al., 2015; Lee & Ma, 2012) we also argue that under higher interactivity conditions, the users ofin this platform will use more of the functions facilitated by this media to fulfil their primary need of socialization. HenceTherefore, we argue that it may adversely affect the secondary communication element of the ad presented in this highly interactive platform. Therefore, this study postulates that:

H1: In social media advert settings, media interactivity influences the users' processing ——of the content of an advert, consumers who come in contact with high interactive (vs.——low interactive) social media will display a low (vs. high) level of ad (a) attention, (b) ——recall, and (c) recognition.

2.2. The Moderating Role of Message Vividness

The above-stated hypothesis in isolation provides a direction to the fundamental question: what types of social media should marketers choose to achieveget maximum ad effectiveness of the ad? It provides a direction that low media interactivity will result in a higher level of ad attention, recall, and recognition, hence a social media platform with low interactivity is

preferred. However, it assumed that this is not the right approach to attain advert effectiveness in social media. Interactivity represents the users' perception of the social media environment (Zhang et al., 2014), and low level of interactivity may hurt the users' outcome expectations (Lin & Chang, 2018). A~~Thus, a~~ media with low interactivity develops a perception among users that it does not carry the expected environmental factors, that in turn undermines the~~ir~~ ~~intented~~intended ~~ion to~~ use of social media. ~~F~~ ~~Thus, f~~rom the audience point of view, high interactivity media demanded, which deliver better communication quality and high-quality information exchange among users (Sykes et al., 2009). Therefore, in this section, we postulate the arguments substantiating a solution to the above-stated dilemma.

Since the high interactivity exerted by the social media direct the users' attention more towards~~into~~ the primary purpose of socialization, using message-driven persuasion tactics redirect consumers~~their~~ attention ~~into~~wards the message (Coyle & Thorson, 2001; Reyes et al., 1980). This persuasiveness can be achieved through presenting vivid messages, because, exposure to a vivid message develops a more intensive reading experience in comparison with a nonvivid message (MacKenzie, 1986). Nisbett & Ross (1980) support the fact~~ed~~ that messages carrying vividness in any platform are likely to attract and keep the attention of the user by stimulating the imagination to the extent that it creates emotional interest, provoke imagery, and proximate in a sensory, spatial or temporal way. The extant studies (e.g., Witmer & Singer, 1998) articulates~~d~~ that message vividness is expressed in terms of the breadth and depth of a message. The degree to which a message appeals to the sensory organs through presentations and cues using graphics, colour, and animations is the breadth of a message, while the depth of a message is the quality and resolution of the presentation (Fortin & Dholakia, 2005). The exposure of more vivid messages presented in the media also stimulates consumers' cognitive elaboration processes (Nisbett & Ross, 1980). The Differential Attention Theory and Availability Valence Theory (Keller & Block, 1997) also

support this argument that highly visible messages promote brand attention, especially in a high resource-demanding situation. This message vividness also lets the audience mentally develop anticipatory experiences with the stimuli (Phillips et al., 1995), thereby resulting in a higher level of memory (Nisbett & Ross, 1980).

The extant literature strongly supports the importance of message vividness as a persuasion factor, the studies also articulated the conditions under it may perform as a better persuasion element (e.g., Block & Keller, 1997; Smith & Shaffer, 2000). For example, Block & Keller (1997) stated that elicited ~~vividness elicited~~ may work as a persuasion element when ~~there exist~~ enough cognitive resources exist. In support of~~with~~ this~~,~~ Smith and Shaffer (2000) also argued that vividness ~~—~~create strong message outcomes when the platform provided is more supportive. In this setting, the study presumes that high interactivity elicited by a platform ~~provides a~~is ~~supportive platform~~, where the users carry a favourable perception towards~~concerning~~ the environment as communication friendly which is~~and~~ also perceive that the media meet their outcome expectations (Lin & Chang, 2018). Therefore~~us~~, exposure to a highly vivid message in a highly interactive media will stimulate the cognitive elaboration process of the users. Particularly, this will elicit consumer~~their~~ emotionality (MacInnis & Price, 1987), concreteness and detail (Taylor & Thompson, 1982), proximity (Sherer & Rogers, 1984), or sensory breadth of the message (Cho, 1999; Fortin & Dholakia, 2005), which ~~will~~result in great message attention and memory. On the contrary, a platform that provides a lower level of interactivity create a perception among users that it is unfavourable and do not meet their expected outcomes. Under this low level of cognition, presenting high (vs. low) vivid messages does not create any effect on the message related outcomes (Ophir et al., 2019). Thus, in this study, we posit the following hypotheses:

H2a: When the customer interacts on a highly interactive social media, exposing an ad ——with high (vs. low) vividness will report a higher (vs. lower) level of ad (a) attention, (b) recall, and (c) recognition.

H2b: When the customer interacts on a low interactive social media, exposing an ad with high (vs. low) vividness will not report any difference in ad (a) attention, (b) recall, and (c) recognition.

2.3. Moderating Role of Anthropomorphism

Extant communication literature (e.g., Taylor & Thompson, 1982) states~~d~~ that if the presented vivid information produces an affective response or emotional arousal, ~~then~~ it can then produce vary favourable communication outcomes (Block & Keller, 1997). More specifically, the effect of vividness can be further augmented when the audience of the message consider that the message is personally relevant and produces an affective response (Taylor & Thompson, 1982). In support of~~with~~ this, we argue that when consumers interact with a highly interactive social media platform with high message vividness, then creating high message relevancy arouses their affective responses towards the same, it, in turn, better customer outcomes.

In this line, Vidal (2007) argues~~d~~ that anthropomorphism represents an effective strategy which spontaneously develops strong personal relevance and affective responses towards inanimate objects. This is because, anthropomorphizing the message/brand creates a perception amongst~~by~~ the consumers that ~~it~~ as actual human beings with emotional states, mind, soul, hence they consider the same as part of their social ties (Puzakova et al., 2013). Social media settings presenting a message with anthropomorphic characteristics trigger the consumers' social and behavioural beliefs (Hudson et al., 2016). Anthropomorphizing of the message/brand direct the consumers to view non-human objects as human entities being capable of reasoning and intent (Puzakova et al., 2013). Mourey et al. (2017) support that

exposure to anthropomorphic message characteristics may enhance their personal relevance and social needs of users, t. This is important in social media settings (Hudson et al., 2016). Therefore, we propose that in highly interactive and vivid social media settings, the consumers consider or evaluates the media as a very favourable one. In this settings, presenting a highly vivid and anthropomorphic message characteristic elicit emotionality (MacInnis & Price, 1987), concreteness and detail (Taylor & Thompson, 1982), proximity (Sherer & Rogers, 1984), or sensory breadth of the message (Cho, 1999; Fortin & Dholakia, 2005), and also more personal relevance. This is because, the consumers are less willing to replace a product/message when they saw it having a humanlike mind, as it creates a strong emotional base (Chandler & Schwartz, 2010). Moreover, anthropomorphizing of the intimate and abstract objects (branded messages) in social media has been identified as stimulation of social cues, and it also generates expected user responses (Perez-Vega et al., 2018).

In support with the above-stated argumentsof this proposition, more , recently, Tuškej and Podnar (2018), foundstated that anthropomorphism could influence consumer brand/message identification positively, which is defined as a psychological state of perceiving, feeling, and valuing his or her belongingness with a brand. While considering it as a psychological element, studies emphasized that anthropomorphism causes increased cognitive fluency (Rauschnabel & Ahuvia, 2014), whereas cognitive fluency is defined as the ease or difficulty of a cognitive process. In support ofwith this, empirical evidence shows that high cognitive fluency provides a sense of intuitive fit with the product/message, whereas low cognitive fluency is frustrating (Aggarwal & McGill, 2007; Belke et al., 2010). Therefore, in highly interactive social media that has high message vividness, choosing to anthropomorphize the brand advert will result in higher cognitive fluency and better message related outcomes amongst the users of the media, including message attention, recall, and recognition. Therefore, we hypothesize that:

H3: When a user interacts on a highly interactive social media environment with vivid ad condition, exposure to anthropomorphic ad (vs no anthropomorphic) features will generate higher (vs. lower) level of ad (a) attention (b) recall, and (c) recognition.

2.4. Mediating Role of Flow Experience

In this section, we propose that the effect of the media interactivity and its boundary conditions direct the user ad attention and memory through an intervening mechanism of flow experience. Flow experience is a cognitive stage in which the consumer becomes wholly involved in the activity. ~~They~~ becoming absorbed ~~will be~~ in a situation where nothing else matters (Nakamura & Csikszentmihalyi, 2009). According to Csikszentmihalyi (1975), flow experience is a state where the individuals focuses on doing an activity for a long time without experiencing the passage of time. It demonstrates an intrinsic motivation or enjoyment of an activity (Csikszentmihalyi, 1975). Research indicates that enjoyment, challenge, control, curiosity and concentration are examples of flow experience (Chang et al., 2017; Pelet et al., 2017). Following prior literary works (e.g., Epley et al., 2007; Fan et al., 2016), this study ~~study~~ suggests that the simultaneous occurrence of media interactivity, message vividness with anthropomorphic messages generate the customer's sense of confidence, social connectedness, control and comfort in human-machine interactions, thereby developing a higher flow experience. This~~It~~ is because, exposing anthropomorphic messages in social media stimulates a set of social cues that are vital for social media immersion, enhancing the smooth flow of social communication (Gretry et al., 2017; Liu et al., 2016). It also supports worked by Nowak & Biocca (2003) , which~~that~~ ~~postualtes~~postulates that the presence of anthropomorphic brand characteristics in social media advertisements leads to a message related cognition causing a positive influence on the flow experience (Pelet et al., 2017). The flow experience received by the user from a medium

influences the consumers' attention and memory towards the embedded brand-related elements (Sreejesh et al., 2018). Therefore, it is suggested that more intrinsic motivation and enjoyment in the social media usage can be created by high anthropomorphic brand advertisements resulting in a favourable flow experience, which in turn, leads to more favourable brand-related outcomes. This flow serves as positive arousal, which is related to the use of social media, and this positive perception canould be transferred to the advertised brand (Steffen et al., 2013). It also supports that, in case of no anthropomorphic brand advertisement, the users' intrinsic motivation and experiences will be low, reports reduced flow experience and it, in turn this , creates a reduced level of ad-related outcomes, such as ad attention and memory. Therefore, we posit that:

H4a: In a highly interactive social media, presenting an ad with high vividness carrying ——————anthropomorphic (vs. no anthropomorphic) features creates ad attention through flow experience.

H4b: In a highly interactive social media, presenting an ad with high vividness carrying ———anthropomorphic (vs. no anthropomorphic) features creates ad recall through flow experience.

H4c: In a highly interactive social media, presenting an ad with high vividness carrying ———anthropomorphic (vs. no anthropomorphic) features creates ad recognition through ———flow experience.

3. Methodology

3.1. Design

The study applied a 2 (interactivity: high vs. low) × 2 (vividness: high vs. low) × 2 (anthropomorphism: yes vs. no) between-subjects experimental design. In this design, all three independent variables were manipulated, and the dependent variables were measured. In addition to this, we also measured some of the confounding variables as covariates.

3.2. Stimuli Selection

The study selected the stimulus required to manipulate the experimental conditions through a series of focus groups and pre-tests.

Focus group interview 1: In the first stage, a focus group interview using ten participants was conducted to identify the popular social media platforms with an adequate level of media interactivity. The selected participants were regular users of social media (M_{age} = 22.5, usage daily 2-3 = 61%, Male = 59%). In this focus group interview, various questions were probed concerning media interactivity and their suggestions concerning various social media platforms with different levels of interactivity. At the end of the focus groups interview, the group identified several popular social media platforms, including Facebook, Instagram, Twitter, LinkedIn, etc.

Pre-test 1: After the focus group interview, in the second stage, 65 participants were recruited for a pre-test which aimed to select two media platforms with high vs low interactivity from a list of suggested social media websites. In this pre-test, the participants were informed that the study aimed to analyze the perceived social media interactivity of five different social media platforms. At the beginning of the pre-test, the participants were informed about the concept of interactivity. Afterwards, these participants (54% female, M_{age} = 21 years, S.D = 2.1) were asked to indicate their opinion towards several questions. These questions are, first, what interactivity meant to them in these five different media platforms. Second, compare the social media interactivity experience with these five different platforms. Third, suggest the prominent interactive features that they experience from these five different social media platforms. The participants were then asked to rate the perceived interactivity of each of these social media websites on a seven-point scale (1 = 'least interactive', 7 = 'most interactive'). From the results of the pre-test, it was found that participants perceived interactivity of media as a feature of the media, that carries 'two-way communication' (33%), 'user-to-user

interactions' (26%), 'sense of control' (21%), 'flooded with information' (15%), and 'other interactive features' (less than 5%). In addition, from the mean ratings of perceived interactivity of the media, we shortlisted two social media websites, one with a highest mean rating (Facebook: M $_{Facebook}$ = 5.5) and the other with the lowest mean value (LinkedIn: M $_{LinkedIn}$ = 1.8), and mean difference was statistically significant (t $_{(64)}$ = 12.21, p < 0.001). Therefore, we decided to use Facebook as a social media platform with high media interactivity and LinkedIn as the media platform with low media interactivity.

Focus group interview 2: During the third stage, another focus group interview was conducted using 12 participants M $_{age}$ = 23.2, Male = 56%). The primary objective of this focus group interview was to select a product category and a brand in that category that can be used while designing the social media message. However, we decided to select the product category based on two preliminary conditions. First, the product category should have higher product familiarity among the study participants. Secondly, to identify a real brand from that product category with less awareness among the study participants. In this study, an authentic brand with a low level of awareness among the participants was selected to avoid the probable confounding effect of prior familiarity of the brand on the manipulated variables, and in turn the outcome variables. These focus group resulted in a unanimous suggestion, where they suggested: "automobiles" as the most familiar product category, and "KIA" as the brand, which carries a low level of brand awareness among the consumers in India.

Pre-test 2: Followed by the focus interview 2, the study conducted a pre-test with 30 participants (M $_{age}$ = 24.3, Male = 61%), to understand the familiarity among the participants about the brand "KIA". The results reported that around 92% of the participants stated that they had no familiarity with the selected brand. Therefore~~Hence~~, we decided to select "KIA" as the brand, and use the advert based on the same.

Stimuli design: Further, in the fourth stage of stimuli design, an advertisement agency was approached to develop different social media adverts that incorporate the vividness and anthropomorphic advert conditions in both the low and high interactive social media settings. The directions were given about~~concerning~~ the preparation of the stimuli carrying varying levels of (high vs. low) of message vividness and anthropomorphism. Besides this, proper diligence was applied to avoid the confounding effect of interactivity while manipulating the message vividness,~~.~~ asp~~This is because, the past~~ertient literature state~~d~~s that vividness is often mistaken for interactivity (Steuer, 1992). T~~Hence, t~~o achieve the vividness manipulations (high vs. low), our~~the~~ study reviewed how vividness conditions reflect the richness with which the brand message is presented in the media. In other words, the extent to which the message/brand post stimulates the different senses (Steuer, 1992), i~~. Thus, i~~n high vividness condition, vividness was achieved by including dynamic animations, contrasting colours, and pictures (Cho, 1999; Fortin & Dholakia, 2005). In the low vividness condition, the use of animations, colours and pictures were less prominent in comparison with high vividness condition. Specifically, for vividness manipulation, we considered vividness in terms of the breadth and depth of the message exposed. Notably, the breadth of the exposed message being achieved through the number of sensory dimensions, cues, and senses presented (e.g., the colours, dynamic animations and graphics)—the depth of the message being exposed through the quality and resolution of the presented message.

In summary, we ~~assured~~ ensured that in high vividness condition~~s~~, the message richness is relatively higher in comparison with low richness condition (Daft & Lengel, 1986). Th~~erefor~~ereus, as indicated in Appendix A, in high vividness condition, we have exposed ~~them~~ a high-resolution graphics (ad) in various colours. However, in low vividness condition, there were no graphics, and the resolution of the presented message was relatively low. Finally, to achieve the manipulation of the presence of anthropomorphism (present vs

absent) in the advert messages, the agency was instructed to use and position brand messages using different human elements in an analogical or physical form. However, in the no anthropomorphic condition, no such human element was integrated into the advert. Therefore, executing all of the stated manipulated conditions of vividness and anthropomorphism, eight different (four in highly interactive and another four in low interactive) social media adverts were designed.

3.3. Participants and Procedure

As part of this study, we made an open invitation to all the graduate students of a large Indian University. The eligibility was communicated in this invitation that they should have active Facebook and LinkedIn accounts, and they are the active users of the same. Within two-week time, 480 participants confirmed their willingness to participate in the experiment and received the same through online. In this, 280 respondents reported that they are active on both Facebook and LinkedIn. From this list, 240 participants were randomly selected. Subsequently, another communication was sent to them informing the date, time, and venue of the experiment, and also requested to share their social media IDs (Facebook and LinkedIn).

The experiment was conducted in two different computer labs of the University (Lab 1: high interactivity & Lab 2: low interactivity). Once the participants arrived, they were randomly allocated into these two different labs. They were asked to select their computer consoles placed in respective labs. In addition to this, the researcher explained the purpose of the study and then detailed the experimentation procedure. The participants were randomly allocated different stimulus (social media messages) to their social media accounts in the form banner ads which was placed in their social media newsfeeds. In lab 1, the participants were instructed to open their Facebook account, and in lab 2, they were given directions to open their LinkedIn account. In the high media interactivity condition (Lab 1: Facebook

Users), in order to make exposure to the advertisements in subject's newsfeed, respondents were requested to visit the Facebook page, named as "Brand Ads" and instructed to set the "receive newsfeed" option from the page, so that the respondent receiveds any updates on the page immediately upon posting on his/her news feed. Similarly, in the low interactivity media condition (Lab 2: LinkedIn), the stimulus was placed in their respective newsfeeds as banners. On this page, placing the messages wasis not as straightforward as in the case of Facebook, because as the postings on this page dido not immediately reflect in user feeds. Therefore, for the LinkedIn profile, we prepared a newsfeed with the name "Brand Ads" and sentd the profile link to the subjects recruited for this study before the experimentation process begins. Respondents were then asked to send a connection request to "Brand Ads". During the experiment, all the respondents were instructed to visit their (Facebook vs LinkedIn) page and to perform any kind of social interactions they wished through this platform for around 15 minutes. After this, all the respondents were asked to close their social media page and were directed to complete a questionnaire. Finally, the researcher debriefed and thanked the participants for their active participation in the experiment. At the end of this experiment, we were able to get a usable sample of 240 (Men = 190; M_{age} = 22.5; S.D = 2.34).

3.4. Measurement

The survey form consists of different sections. Firstly, we measured the covariates, such asincluding the intensity of usage and attitude towards social media platforms (Facebook vs LinkedIn). This measurement was incorporated following the recommendation of Boerman et al. (2017). To measure the intensity of usage of the media, participants were asked: 'how often they check their Facebook/LinkedIn accounts'(1 = never used, 2 = in a month less than once, 3 = in a week 2-5, 4 = one time in a day, 6 = in a day 2-5 times, 7 = in a day 6-10 times, 8 = more than 10 times in a day). In response to this, the majority of participants stated that

they check their Facebook (51%, 2-5 times) and LinkedIn (49%, 2-5 times) accounts regularly. This suggests that the same proportion of the participants in both the manipulated conditions use Facebook/LinkedIn. In addition, we also asked the participants to report their attitude towards Facebook/LinkedIn posts on a 5-point scale (1= 'very much unfavourable', to 5 = 'very much favourable'). The mean analysis of attitude across the media (Facebook vs LinkedIn) reported a favorable score, showed no statistically significant difference in these score (M $_{Facebook}$ = 3.44, M $_{LinkedIn}$ = 3.02, t = 1.01, $p > 0.01$). These results confirm that the attitudes across these manipulated conditions are statistically the same. ~~Hence,~~ ~~T~~there is no possible chance of confounding of the social media attitude on the outcome variables~~,~~. ~~i~~In addition ~~to this,~~ we also measured the respondent mood, product involvement (automobiles: cars). This measurement was conducted under the impression that the respondent mood and product involvement may also carry confounding effects on the reporting of the attention, recall and recognition of the brand message, which became the covariates in the study. Besides this, the respondents were then asked to rate the questions covering the study manipulations, including media interactivity, vividness, and anthropomorphism. Further, their responses towards the outcome variables, such as message attention, recall and recognition, were also measured. Follow~~ing~~~~ed by~~ this~~,~~. we asked participants their ~~their~~ perceived realism ~~concerning~~ about ~~–~~the manipulated conditions (social media message exposure), ~~where~~ the question them ~~asked participantstipants~~ to rate ~~–~~the extent of perceived realism concerning the exposed stimuli. Finally, they also provided information about their demographics. All the scales used to measure the above-said variables are presented in Appendix B.

4. Data Analysis & Results

As part of the first stage of the data analysi~~s~~s~~,s, first,~~ we assessed and confirmed the success of manipulations executed during the experiment~~,~~. ~~Followed by this,~~ we then assessed the fundamental assumptions behind the data. After manipulation and assumptions confirmation,

4.1. Manipulation Checks

In this stage, the study evaluated the manipulation of all the three manipulated variables separately using t-tests. The results of the manipulation checks supported that the manipulation results of interactivity ($\alpha = 0.78$, $M_{[high\ interactivity]} = 5.43$, $M_{[low\ interactivity]} = 2.32$, [t = 22.23, $p < 0.01$]), vividness ($\alpha = 0.81$, Mean $_{[high\ vividness]} = 5.35$, $M_{[low\ vividness]} = 3.12$, [t = 13.81, $p < 0.01$]), and anthropomorphism ($\alpha = 0.77$, $M_{[anthropomorphism]} = 5.23$, $M_{[No\ anthropomorphism]} = 2.19$, [t = 18.15, $p < 0.01$]) were statistically different and significant. Hence, the study confirmed the success of manipulation execution. ~~Besides this, we~~We also found that the mean realism scores as satisfactory ($M_{[realism]} = 5.22$). Further, we ~~also~~ checked the difference of dependent variables along with the categories of gender and social media usage~~.~~, ~~hHoweve~~however~~r,~~ the results did not show any significant difference in these dependent variables. Hence, we inferred that consumer gender and the social media usage has no role in influencing the outcome variables.

4.2. Test of Assumptions

Before the formal test of hypotheses, we checked the assumption behind the data, such as independence, normality, and homogeneity of variance of the outcome variables. During the data collection, each respondent represented a different manipulated condition, therefore ~~.~~ ~~Hence,~~the assumption of independence of observation was met. As part of the analysis of normality, we checked the skewness and kurtosis of the outcome variables. The results supported that the skewness and kurtosis values of these outcome variables were within the acceptable limit of ± 2 (Field, 2009), t~~.~~ ~~T~~his indicated that the data follow the assumption of

normality. While checking the homogeneity of variance using the Box's M test, we found that there is a slight variation in the homogeneity of variance assumption. However, in the study, we applied relatively equal sample size in the manipulated groups, and the ratio (large group sample size/small group sample size < 1.5) that supported that it carries a very minimal impact in the study results (Hair et al., 2010). The study confirmed the suitability of the data for performing subsequent analysis.

4.3. Test of Hypothesis (H1 to H3)

To test the hypothesis (H1 to H3), we used a 2 (interactivity: high vs low) × 2 (vividness: high vs low) × 2 (anthropomorphism: yes vs. no) between-subjects MANCOVA with recall, message attention, and recognition as dependent variables. In this, we incorporated the categorical variables, such as media interactivity, vividness, and anthropomorphism as independent variables, social media attitude, usage intensity, product involvement, and consumer mood as covariates. In this study, examination of the significance of the covariates showed that product involvement ($\alpha = 0.80$; Wilk's $\Lambda = 0.949$, $F_{(3, 228)} = 4.05$, $p < 0.05$), and media usage intensity (Wilk's $\Lambda = 0.785$, $F_{(3, 228)} = 8.15$, $p < 0.05$) are significant covariates. However, the consumer mood ($\alpha = 0.77$; Wilk's $\Lambda = 0.914$, $F_{(3, 228)} = 1.24$, $p > 0.05$) and social media attitude (Wilk's $\Lambda = 0.891$, $F_{(3, 228)} = 1.45$, $p > 0.05$) did not show any significant effect. Therefore, support with past studies (e.g., Leung et al., 2019), to confirm clarity, we decided to eliminate the insignificant covariates.

The MANCOVA results supported a significant main effect of media interactivity on the outcome variables (Wilk's $\Lambda = 0.829$, $F_{(3, 228)} = 15.67$, $p < 0.01$, attention $_{(high\ interactivity)} = 3.16$, attention $_{(low\ interactivity)} = 4.08$; recall $_{(high\ interactivity)} = 3.37$, recall $_{(low\ interactivity)} = 4.10$; recognition $_{(high\ interactivity)} = 3.42$, recognition $_{(low\ interactivity)} = 4.00$). This supports that a high

level of media interactivity (vs low interactivity) adversely affects the consumers' message attention, recall, and recognition in social media advertising. Thus, we found support for H1.

Followed by the main effect, we checked the effect of interaction between media interactivity × vividness on the outcome variables. The results support a significant 2-way interaction effect (Wilk's Λ = 0.77, $F_{(3, 228)}$ = 21.83, $p < 0.01$). Followed by this, as part of testing H2a and H2b, two different pre-planned contrast tests were conducted. The first pre-planned contrast test supported that in a highly interactive social media, an exposure to high message vividness (vs low vividness) reported favorable message related outcomes (attention [high interactivity with high vividness] = 3.91, attention [high interactivity with low vividness] = 2.47, recall [high interactivity with high vividness] = 4.35, recall [high interactivity with low vividness] = 2.43, recognition [high interactivity with high vividness] = 4.45, recognition [high interactivity with low vividness] = 2.44; Wilk's Λ = 0.629, $F_{(3, 228)}$ = 44.80, $p < 0.01$). Thus, the study found support for H2a.

Followed by this, in the second pre-planned contrast test, we found that message vividness do not carry statistically significant causal impact on consumers' message related outcomes in a low interactive social media (attention [low interactivity with high vividness] = 4.19, attention [low interactivity with low vividness] = 3.92, recall [high interactivity with high vividness] = 4.11, recall [low interactivity with low vividness] = 4.06, recognition [low interactivity with high vividness] = 4.06, recognition [low interactivity with low vividness] = 3.90; Wilk's Λ = 0.986, $F_{(3, 228)}$ = 1.09, $p > 0.01$). Thus, the study found support for H2b.

Followed by the two-way interaction effects, we examined the three-way interaction effect of media interactivity × message vividness × anthropomorphism on the outcome variables (See Table 1). The results showed a significant three-way interaction on the outcome variables (Wilk's Λ = 0.965, $F_{(3, 228)}$ = 2.74, $p = 0.04$). Further, we conducted a follow-up contrast test to examine the effect of anthropomorphic message feature to condition

the effect high media interactivity and high message vividness. The test results showed that presenting anthropomorphic messages (vs no anthropomorphism) in a high interactive and message vividness condition strengthen the message related outcomes of attention, recall, and recognition (Wilk's $\Lambda = 0.732$, $F_{(3, 228)} = 27.82$, $p = 0.00$, attention [high interactivity, high vividness, anthropomorphism] $= 4.75$, attention [high interactivity, high vividness, no anthropomorphism] $= 3.07$, recall [high interactivity, high vividness, anthropomorphism] $= 5.30$, recall [high interactivity, high vividness, no anthropomorphism] $= 3.40$, recognition [high interactivity, high vividness, anthropomorphism] $= 5.66$, recognition [high interactivity, high vividness, no anthropomorphism] $= 3.24$). This result supported the hypothesis H3.

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Insert Table 1 about here

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4.4. Test of Mediation (H4a-H4c)

Since the hypotheses (H4a-H4c) explicitly mentions only the effect of media interactivity along with high message vividness and anthropomorphic (vs no anthropomorphic) message conditions through flow experience, a subset of the data was derived from the original data representing the said exposure. That is, from the original data, we eliminated low vividness exposed samples. LaterWe then , we performed a path analysis in AMOS 25, where we kept media interactivity (INT) as the independent variable (dummy coded 1 = high interactivity, 0 = low interactivity), flow experience (FLEX) as the mediator, ad attention (ATTN), ad recall (RCL), and ad-recognition (REG) as the outcome variables. As part of the analysis, using high vivid message exposed samples , we performed two separate models for anthropomorphic (see Figure 1a) and a non anthropomorphic (See Figure 1b) message features, and estimated the specific indirect effects using the user-defined estimands in AMOS 25. WLater, we then compared these specific indirect effects and

examined its differences/dominance across anthropomorphic (vs no anthropomorphic) message conditions.

As shown in Figure 1a, the results indicated that, in a high (vs. low) interactive social media, an exposure of high message vividness with anthropomorphic message feature reports higher flow-experience (INT → FLEX = 1.97, $p < 0.01$), which in turn directs favourable ad-attention (FLEX → ATTN = .67), ad-recall (FLEX →RCL =.65, $p < 0.01$), and ad-recognition (FLEX → REG = .63, $p < 0.01$). More importantly, there exists significant the indirect effects through flow experience on ad-attention (IND1: INT → FLEX → ATTN = 1.31, $p < 0.01$), ad-recall (IND2: INT → FLEX → REC = 1.28, $p < 0.01$), and ad-recognition (IND3: INT → FLEX → REG = 1.23, $p < 0.01$).

Similarly, as shown in Figure 1b demonstrates, the results support that in a high (vs. low) interactive social media, an exposure of an ad carrying high vividness featuring no anthropomorphic ad characteristics also reported to have a higher flow-experience (INT → FLEX = .78, $p < 0.01$). This flow experience leading to develop favourable ad-attention (FLEX → ATTN = .60), ad-recall (FLEX →RCL =.35, $p < 0.01$), and ad-recognition (FLEX → REG = .42, $p < 0.01$). Further, the indirect effect through flow experience on ad-attention (IND4: INT → FLEX → ATTN = .470, $p < 0.01$), ad-recall (IND5: INT → FLEX → REC = .269, $p < 0.01$), and ad-recognition (IND6: INT → FLEX → REG = .327, $p < 0.01$) also reported as statistically significant.

Further, aA comparison of the specific indirect effects across these two-path models representing the differential intervening effect of flow experience across anthropomorphic (vs no anthropomorphic) message conditions also reported statistical significance. That is, the comparison of the specific indirect effect of media interactivity on ad-attention reported that the indirect effect is stronger in anthropomorphic message exposure in comparison with no

anthropomorphic message exposure (IND1-IND4: = .848, $p < 0.01$). OurThus, the study supportsed H4a. Similarly, the difference in indirect effect of interactivity on ad- recall (IND2-IND5: = 1.01, $p < 0.01$), and ad-recognition (IND3-IND6: = .902, $p < 0.01$) also reportsed that it is stronger when anthropomorphic (vs. no anthropomorphic) ad exposure was elicited. Thereforeus, the study supportsed the hypothesis of H4b and H4c.

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Insert Figure 1a & 1b here

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5. Discussion & Implications

5.1. Theoretical Implications

This study contributes to the marketing communication literature, especially in advertising through social media literature in numerous ways:

Firstly, this e current research made an extensioncontributes to the emerging body of knowledge on brand promotions in social media platforms (e.g., Alves & Fernandes, 2016; Auschaitrakul & Mukherjee, 2017; Calder et al., 2009; Gretry et al., 2017; Kumar et al., 2016) by studying the causal effect of social media interactivity on advertising effectiveness. More specifically, this study makes a significant contribution to this stream of literature by giving a better understanding of one of the important media characteristics, media interactivity. In this attempt, the study provides vital directions to the academicsians in demonstratingby showing how media interactivity works in social media settings? Whichat conditions by which it can be further strengthened to create message-driven outcomes, and, how do these conditions create better social media advertisement-based outcomes?.

Secondly, ourthe current research is a pioneering attempt to highlighting the adverse effect of media interactivity and noted several ways to manage media interactivity social

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media advertisement settings. In the extant literature, there exists contradictory findings concerning the influence of interactivity on the behaviour and attitude of consumers in general advertisement context (e.g., Guillory & Sundar, 2014; Song & Bucy, 2008; Sundar et al., 2010). For example, studies propose~~d~~ that web interactivity direct the consumers to process information more thoroughly, and enhances the message recall (e.g., Gao 2011; Sicilia et al., 2005), it does not affect consumer outcomes (e.g., Kim & Stout, 2010; Lustria, 2007), and it adversely affect consumer cognition (Ashley & Tuten, 2015; Liu & Shrum, 2002; Sundar, 2004). In this context this is the~~a~~ ~~, to the author knowledge, this is the~~ first attempt ~~which~~ to empirically prove~~d~~ that interactivity ~~is essential~~ in ~~a~~ social media advertisement setting~~, but it~~ adversely affects the ad effectiveness~~.~~ ~~-~~ h~~H~~owever~~,~~ the~~is~~ adverse effect of interactivity can be managed by using the message mechanics of vividness and anthropomorphism. This understanding is essential, because the interactivity in traditional media is completely different from new media (e.g., social media)~~.~~ h~~H~~ence~~,~~ studies exclusively for social media settings warrant attention.

Further, this research also makes a unique contribution to the current understanding of social media advertising by examining the effect of ~~message~~ content related aspect of message vividness in creating a better understanding of how the depth and breadth of this message characteristics influences the effectiveness of social media advertisement. Furthermore, this research makes a contribution to marketing knowledge by integrating the importance of media mechanics, anthropomorphism, and found its conditional effect on interactivity and message vividness in strengthening the effect of advertisement effectiveness in social media platforms. This discovery is essential in social media literature as there is a lack of clarity sounding out whether anthropomorphising the product or brand elements influences consumer behaviour, especially in a social media advert context. ~~Besides~~ In addition, this research examines the effect of the psychological process the users of social

media undergo while they interact with the social media advert, that is the consumers' flow experience. This insight ~~regarding~~ into the underlying psychological processes is essential in social media communication settings because this ~~insight~~ provides direction to the current understanding concerning the media interactivity in a popular and most demanding platform, social media.

5.2. Managerial Implications

In addition to the theoretical contributions, the study provides several directions to managerial practice. Firstly, ~~the~~ marketing ~~ers~~ and advertising agencies can learn from the findings that high interactivity of social media adversely affects the consumer's message attention, recall and recognition. T~~hus,~~ this study can be used as a guide for media companies, ~~especially~~ to understand how ~~do the~~ companies can minimise the adverse effect of interactivity on social media platforms while promoting their adverts. Therefore, it is ~~directed~~ suggested that there is a need for innovative methods and marketing strategies that are suitable for social media communications, specifically based on the degree of interactivity of the social media platform.

~~Second, based on the findings,~~ The findings of our work ~~it is~~ suggest~~ed~~ that marketing managers need to design highly vivid advertisements to gain better user attention and memory in highly interactive media. Social media marketers and communication designers need to identify better techniques which elicit message vividness, especially when they want to communicate their product or service information on a highly interactive social media platform. Further, the study also ~~suggests~~ finds that while advertising in low interactive social media, ~~companies~~ marketers should take extra care, because low interactivity does~~would~~ not generate audience interest and expected outcomes. In an extreme case, ~~if they want to make~~ advertisements in social media with low interactivity, ~~they~~ need to identify other innovative communication methods to motivate consumers to interact with the social media network.

Thisus, the study recommends that marketers should direct their advertisements towardsin those social media platforms which provide sufficient resources in their network to achieve the overall objective of social networking. OIn these platforms, though ad attention happens to be low, marketers can strategically use message mechanics to manage the adverse effect of interactivity.

Further, thisThis study also directs recommends that the use of anthropomorphic brand elements offers a stimulus to generate message attention, recognition and recall in highly interactive social media. That is, human characteristics can be applied to elements of brands messages, and when the brand applies anthropomorphic brand characteristics, consumers are more likely to perceive the message/brand as the human counterpart in the social network. Therefore, it is proposed that when an advert on an interactive social media platform displays cognitive elaboration through the message vividness, the message will gain more attention than a less vivid transitional message. In this situation, exposing a highly anthropomorphic message elicits a higher level of social cues. These social cues are stimulated through anthropomorphic featured messages, as theyit generates interest towards both media and the advert amongst the users. More precisely, this research provides directions by indicating the conditions which help to overcome the adverse effect of interactivity, . Therefore, this research is acan be used as a trigger for marketers, media planners, and advertising agencies to develop their message design and execution aspects.

6. Limitations and Directions for Future Research

Although this study offers several unique directions to both theory and practice, we cannot completely ignore the same in the context of limitations. These limitations can be judiciously addressed to enrich the body of knowledge in the field of social media communications. Firstly, this research directs the marketers towards identifying the causal process related to the interactivity of the media and its impact on customers' advert related outcomes in social

media advert settings. More precisely, the understanding of this study is limited to one of the essential features of media, that is interactivity. In addition to interactivity, there can be other different media characteristics or features interact with interactivity, which in turn influences consumer the attention and memory of the adverts presented in social media. Hence, we recommend future researchers to look at other media relevant characteristics along with interactivity. Secondly, at the end of the study, we presume that media interaction and the evaluation of the advert presented can also vary across geographical contexts and age groups. Therefore, it is recommended that future researchers look into an extension of the current study into a wide range of demographic groups, representing a wide range of cultural settings. Third, this research is orientated towards just two essential boundary conditions which will shape the adverse effect of high media interactivity to create message attention and memory of social media users. Therefore, it is recommended that future researchers investigates the identification and application of other factors that are relevant to the various message and media mechanics so that better insight could be made in social media advertising reviews and practice. Fourth, in this research, the sample respondents were exposed to brands which were very unfamiliar to them; this was basically to avoid the confounding effect of previous brand familiarity. Therefore, it is suggested that future research isers conduct in studies in real brand settings. Finally, this study considers the intervening effect of flow experience, which is one a crucial psychological mechanism. We recommend that other critical social psychological mechanisms should should be considered in future studies, for example, felt involvement, and emotional connection, so that the robustness of this research can be further enhanced.

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Appendix A: Social media Advertisement (Facebook/LinkedIn)

Low Anthropomorphism x Low Vividness	High Anthropomorphism x Low Vividness
Low Anthropomorphism x High Vividness	High Anthropomorphism x High Vividness

Appendix B: Measurement Items

Media interactivity (Kalyanaraman and Sundar, 2006)

- I interacted with the content of this social media.
- I interacted with the structure of this social media website.
- This social media website enabled two- way communication.
- This social media website enabled synchronous communication.
- This social media website enabled active control.

Social Media Attitude (Boerman et al., 2017)

- My attitude towards the social media (Facebook/LinkedIn) is:

Media Usage Intensity (Boerman et al., 2017)

- Indicate the extent to which you use Facebook /LinkedIn

Consumer Mood (Pecheux and Derbaix, 2002)

- Just now, I am in a joyful mood.
- Just now, I have great fun, I laugh a lot.
- Just now, I feel like laughing.
- Just now, I am happy.
- Just now, I am feeling sad.
- Just now, I am grousing.
- Just now, I am angry.
- Just now, I am grumbling.

Product Involvement (Zaichkowsky, 1985)

- I would be interested in reading information about how crossover cars are made.
- I would be interested in reading consumer reports article about crossover cars.
- I have compared product characteristics among crossover car brands.
- I think there is a great deal of differences among crossover car brands.
- I have a most-preferred brand in crossover cars.

Anthropomorphism (Aggarwal and McGill, 2007)

- While watching the advertisement, I felt the brand in the advertisement as:
    a. (1 = 'Machine Like' to 7 = 'Human Like')
    b. (1 = 'Unnatural' to 7 = 'Natural')
    c. (1 = 'Artificial' to 7 = 'Life Like')

Vividness (Keller & Block, 1997)

- While watching the advertisement, how easy it was to picture or otherwise imagine the usage of brand? (1 = 'Very difficult' to 7 = 'Very easy')

Realism

- How realistic was your experience of watching the advertisement in social media? (1 = 'Not realistic at all to 7 = 'Very realistic')

Brand Recognition (Sreejesh & Anusree, 2017)

- Identify the brand name which you have noticed in advertisements while using the social media.
- Identify the product type which you have noticed in the advertisement while using the social media.

- Identify the correct logo of the brand which you have noticed while using the social media.
- Identify the correct logo of the parent brand which you have noticed while using the social media.
- Identify the color of the product which you have noticed in the advertisement while using the social media.
- Identify the product variant category which you have noticed in the advertisement while using the social media.
- Identify the number of brand characters in the advertisement (Animated/graphics characters)

Brand Recall (Mikhailitchenko et al., 2009)

- Write the product attributes and its benefits as you could remember about the brand which you have noticed
  (Respondents were asked to record 7 attributes and the answers were coded by an expert)

Brand Attention (Sreejesh & Anusree, 2017)

- How much attention you have paid to the brand messages while using the social media.
- How much you have focused on the brand messages which were seen in the social media website.
- How much you have concentrated on the brand messages while using the social media.

Flow Experience (Sreejesh et al., 2018)

During the social media usage, how do you experience the following?

- I felt engaged in an optimum way.
- My thoughts and actions ran automatically.
- I did not notice how time passed.
- I had no trouble concentrating.
- I got immersed in social media.
- Using the social media took me away from it all.
- I thought I'm not allowed to do any mistakes.
- I was worried about a negative comment.

	Wilks' Lambda	F (df)	Sig.
Intercept	.515	71.602 (3,228)	.000
PDTINV	.949	4.05 (3,228)	.000
USEINT	.785	8.15(3,228)	.000
INT	.840	14.524(3,228)	.000
VIVD	.761	23.927(3,228)	.000
ANTH	.679	36.011(3,228)	.000
INT × VIVD	.777	21.803(3,228)	.000
INT × ANTH	.987	1.023(3,228)	.383
VIVD × ANTH	.904	8.068(3,228)	.000
INT × VIVD ×ANTH	.965	2.743(3,228)	.044

Table 1: MANCOVA Results

Note: PDTINV = product involvement [covariate], USEINT = media usage intensity [covariate], INT = media interactivity, VIVID = message vividness, ANTH = anthropomorphism.

Figure 1a:

Effect of interactivity (vs. high vivid and anthropomorphic message) on outcome

ATTN

67*
(.75)

INT

1.97*
(.81)

FLEX

.65*
(.74)

RCL

.63*
(.70)

REG
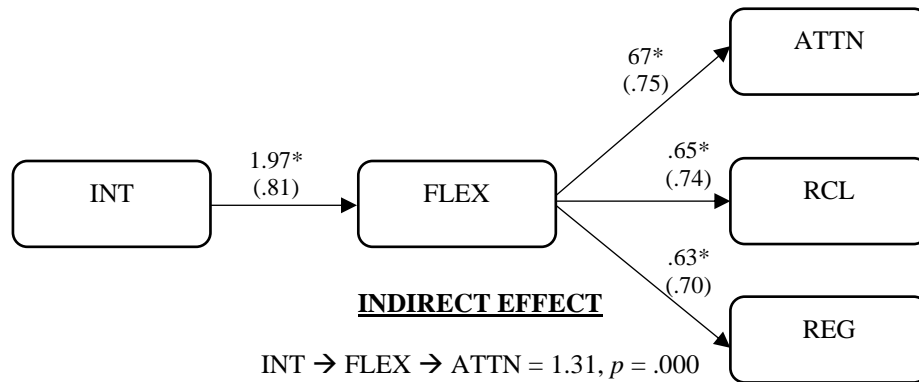
INDIRECT EFFECT

INT → FLEX → ATTN = 1.31, *p* = .000
INT → FLEX → RCL = 1.28, *p* = .000
INT → FLEX → REG = 1.23, *p* = .000

Note: * shows significant at 1% level.
Values in the bracket show standardized estimates, and outside indicate unstandardized estimates.
INT (dummy coded: 1= high interactivity, 0 = low interactivity)

Figure 1b:

Effect of interactivity (vs. high vivid and no anthropomorphic message) on outcome

ATTN

60*
(.61)

INT

.78*
(.57)

FLEX

.35*
(.35)

RCL

.42*
(.44)

REG
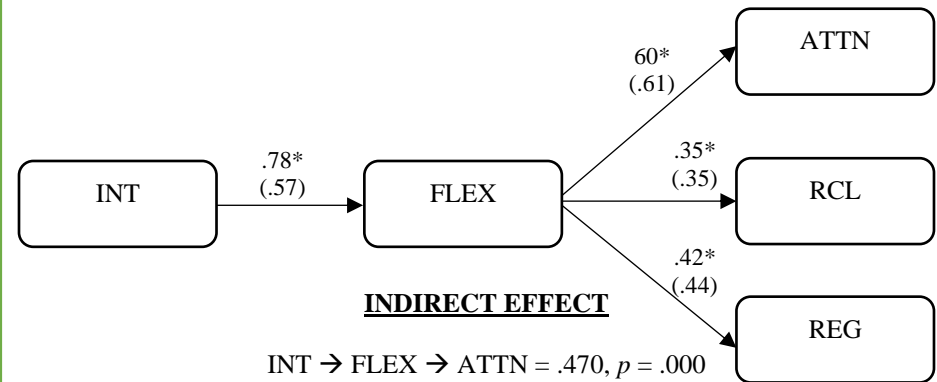
INDIRECT EFFECT

INT → FLEX → ATTN = .470, *p* = .000
INT → FLEX → RCL = .269, *p* = .000
INT → FLEX → REG = .327, *p* = .000

Note: * shows significant at 1% level.
Values in the bracket show standardized estimates, and outside indicate unstandardized estimates.
INT (dummy coded: 1= high interactivity, 0 = low interactivity).