#ATHLETEACTIVISM: THE INFLUENCE OF DIGITAL EMOTION CONTAGION IN ATHLETE INFLUENCERS' MULTIMODAL SOCIAL ADVOCACY MESSAGING

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ABSTRACT

Brands and social media influencers (SMIs) have increasingly turned to Instagram to spread awareness and promote social activism to their followers. The combined use of visual and textual content in a post allow the influencer to generate an emotional response within a consumer and direct that emotion towards action. This research set out to understand what type of emotion emoted by the SMI leads to the greatest number of consumer engagement behaviors (CEBs) on the influencer's instagram post, and which of the two mandated communication channels that make up an Instagram post (visual and textual) are more influential to CEB outcomes? This research was rooted in the theories of digital emotion contagion and multimodality. To test these questions a series of negative binomial regressions were run on a sample of Instagram posts taken over the span of three years from 200 professional athletes. The results of the tests showed that positive emotion posts tend to generate more comments than negative emotion posts, overall, but the use of anger in visuals was more effective at generating more comments on a post, while the use of positive or uplifting textual content in a caption led to a higher number of comments. Future research should consider the theory of social appraisal and determine if the presence of likes, themselves, on a post make the content more credible to consumers; future studies should also explore the relationship between crisis communication and corporate social advocacy (CSA) literature – particularly when the topic being advocated is no longer an instance of personal philanthropic interest, but closer to a factor of national health concern (i.e., "wear a mask" pleas).

LIST OF ABBREVIATIONS AND SYMBOLS

β	Effect size
SE	Standard error
LCI	Lower confidence interval
UCI	Upper confidence interval
P	Significance indicator

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INTRODUCTION

Brands and public figures are increasingly engaging in corporate social advocacy (CSA), taking public stances on controversial sociopolitical issues to communicate their values to consumers (Dodd and Supa 2015; Wilcox 2019). Influencer advertising is a particularly key tool in social media advertising, in general, and specifically in terms of leveraging social media to communicate CSA (Smith, Kendall, and Knighton 2018; Li 2021). Consumers desire social media brands to serve as facilitators for connection and social good. Sprout Social (2021) reports that 78 percent of consumers want brands to help connect people on social media, and 62 percent believe brands can unify people with different backgrounds and beliefs. Thus, communicating CSA and facilitating connection around social causes can lead to positive brand outcomes (Sen et al. 2006). However, the brand must be seen as sincere if CSA communication is to render rewards (Yoon et al. 2006); the Edelman Trust Study (2020) reports that 70 percent of social media users permanently lose trust in companies who place profits over social good. Social media influencers (SMIs) are particularly persuasive CSA communicators because they are viewed as more authentic and having less commercial intent than brands (Lee and Eastin 2020).

SMIs are brand-consumer hybrids that begin as being consumers with specific interest in and perceived expertise product areas making them more relatable and authentic to consumers than brands (Breves et al. 2019; Britt et al. 2020; Lee & Eastin 2020; Tukachinsky & Stever 2019). As their follower count grows, SMIs transition into brand status as commercial and social benefits begin to be garnered because of their popularity. SMI relationships with their followers

develop much like consumer-brand relationships in that emotional attachment is developed through ongoing consumer engagement behaviors (e.g., interaction; Araujo et al. 2020; Britt et al. 2020; Hayes, King, and Ramirez 2016). As a result, though the SMI grows into their own brand, their persuasive abilities are retained and communication with SMI networks becomes increasingly emotion-laden as follower count grows (Britt et al. 2020).

Recent research has shown that SMIs can leverage emotional attachment to be powerful social advocates. Their ability to shape and sway social cause narratives, enact change, and spark social movements has been illustrated (Grave 2017; De Veirman et al. 2017; Breves et al. 2019; Barbera et al. 2019). Emotional contagion is a primary driver of collective action (Aminzade & McAdam 2002; Goodwin et al. 2001; Jasper 2011; Taylor & Rupp 2002). In the social media context, digital emotional contagion occurs when users are exposed to higher numbers of positive or negative emotions online and, thus, adopt similar emotions as those predominantly displayed (Goldenberg & Gross 2020). As influencer networks are emotion-laden and vast in size, CSA by SMIs has the potential to strongly alter social cause conversations. While little extant research exists, understanding the impact of emotion expressed by SMIs on CSA consumer engagement behaviors is vital to understanding their potential role in moving social causes forward.

The mode of communication employed to communicate emotion also likely influence consumer engagement with CSA messages. The two predominant messaging modes on social media are text and video. Cheshin et al. (2011) found that emotion contagion occurs even when non-verbal cues are scarce and only textual cues are present. Similarly, Rosenbusch et al. (2019) studied the effects of multilevel emotion transfer on YouTube and found that video-level emotions do lead to an influence on audience emotions. The main difference in how these two

popular mono-modal avenues of communication lead to emotional adoption in a consumer is the interpretation of action and intent in messaging. In video communication, non-verbal cues can be read and duly interpreted for intent; in textual communication, the lack of non-verbal cues leads to a reliance perceived intent of action. For example, Cheshin et al. (2011) showed that behaviors are perceived as a display of anger when resolute behavior is interpreted, likewise, displays of flexibility in behavior lead to an interpretation of happiness. These mono-modal channels are important, but it is their combination which may lead to a new powerful form of messaging: multimodal communication. Multimodality is the use of visual messaging accompanied by textual messaging to elicit a more powerful message that interacts with the audience in ways a visual-only message or verbal-only message cannot (Barbera et al. 2019). Considering the ubiquity of platforms such as Instagram, which entails a combination of text (captions) and visual communication, it is imperative that multimodal effects be understood in the influencer advertising context. In particular, understanding the impact of emotion conveyance through multimodality is crucial to delineating emotional contagion effects on outcomes.

This study proposes to employ computation text analysis and biometrics to examine CSA Instagram communication by professional athletes from four major sports. The intertwining effects of emotion and multimodality in CSA influencer advertising will be examined through the lenses of digital emotional contagion and multimodality. Findings seeks to provide greater insight into how emotion can be used to lift engagement with social causes and the effectiveness of SMI in CSA communication. This study will proceed as follows: a thorough literature review of previous findings in influencer marketing, emotion's role in online influence, multimodal communication, Instagram as an advertising platform, and SMI's involvement in CSA messaging; an explanation of the theoretical framework of digital emotion contagion and

multimodality and how they intertwine to influence professional athlete influencer CSA communication; a collection of hypotheses and research questions that posit the expected outcomes when testing the combination of emotionally charged messages and the avenues by which the message is transferred; a methodology section outlining the procedures used to collect said data and test the hypotheses; a discussion of the results; and then finally the implications of this study and future research directions.

LITERATURE

This study explores the relationship between emotion in SMI social advocacy (SA) messaging across multimodal channels and its effects on consumer engagement behavior. The role of influencer advertising is critical and equally as important is the category of SMI selected to study, as illustrated by Campbell and Ferrell (2020). Professional athletes, because of their notoriety for accomplishments outside the social media sphere, act as celebrity SMIs whose influence stems mainly from consumer liking, perceived expertise, and consumers wanting to emulate them (Campbell & Ferrell 2020; Miciak & Shanklin 1994). This emulation and liking is driven by emotion, and it is important to understand relationship between emotion evoked by influencers and consumer engagement behaviors. The channel of communication is also important; multimodal communication offers unique benefits to the diffusion of emotion that traditional, single-channel avenues, do not. Instagram is a widely-used SMI advertising platform wherein multimodal communication is employed. Finally, the content of the message is worth discussing. Understanding what constitutes CSA messaging and the CSA literature behind SMIs all build to the understanding of this study.

Influencer Marketing

As more consumers turn towards social media to learn about products, research brands, and help make purchase decisions, companies are quickly following suit and putting an emphasis on social media (Lou & Yuan 2019). Brands are turning towards SMIs to partner with their brand and help influence consumers. Influencer marketing is a form of social media marketing

wherein a brand collaborates with a SMI and asks said SMI to create sponsored content which endorses the brand and post it to their channel for their audience to consume with an overall goal to increase brand awareness and drive product sales (Lou & Yuan 2019). A once small market, the SMI marketing industry has risen quickly spending $1.7 billion in 2016, to $9.7 billion in 2020, and an estimated $13.8 billion in 2021 (Influencer Marketing Hub 2021). SMI-generated content is also found to be more effective; SMI created advertisement is found to be 6.9 times more effective than studio-shot content (Ki & Kim 2019). In order to maximize the benefits of SMI marketing, studies find it is imperative for a brand to partner with the right SMI (Djafarova & Rushworth 2017).

Campbell and Grimm (2019) define an influencer as someone who posts to social media in exchange for compensation; Ki and Kim (2020) further elaborated stating SMIs are those who have built a sizable social media network of followers and thereby have acquired the potential to exert their influence over their followers. However, in the social media landscape where anyone can post and curate content to form an internet persona, the lines can become blurred as to who makes a reputable SMI worthy of company investment. Research has been conducted to categorize different levels SMI into different categories of influencer type - each category benefitting from its own unique sets of characteristics.

Campbell and Farrell (2020) broke influencers down into five distinct categories, listing from largest to smallest:

> **Celebrity Influencer:** Anyone who enjoys individual public recognition outside of social media for their achievements or work. Professional athletes or movie actors are examples of individuals whose fame is not dependent on the use of social media. These influencers most often have the largest followings and strike endorsements with the largest brands. They command their perceived expertise and cultural cache to influence. They tend to form weak brand connections and relatively low engagement rates.

Megainfluencer: Like celebrity influencers, they command a high follower count (excess of 1 million) and form an established expertise. However, the major difference between celebrity influencer and megainfluencer is that the megainfluencer relied entirely on social media to achieve their celebrity status. These are the biggest of the "internet famous" individuals but are relatively unknown outside of the digital screen. These influencers typically align themselves more closely with paid partnerships

Macroinfluencer: These influencers have yet to gain the "celebrity" status but still command a large following between 100,000 and 1 million followers. Macroinfluencers receive especially high engagement rates and become a preeminent voice in their specialized niche (food, travel, unboxings, etc.) They still can leverage their large followings to be a useful tool for brand awareness campaigns and come at a substantially cheaper cost than their larger counterparts.

Microinfluencer: Microinfluencers are successful but much smaller in size and scope than macroinfluencers, usually presiding in follower counts of 10,000 to 100,000. Their audience typically is localized to a geographic area and their partnership strategy is more diverse – routinely partnering with a wider array of industries. Interaction rates are quite high, and their recommendations are often seen as more genuine than higher level influencers because they are seen as especially approachable and relatable.

Nanoinfluencer: Their followings are mostly friends, acquaintances, and those localized closer geographically. Their follower counts are less than 10,000 but experience the highest rate of interaction. They are just beginning to refine their social media persona and are incredibly proactive with engagement and partnerships. Ideal for brands who want to cut cost and incentivize through internships or free products in exchange for exposure.

Influencer marketing success comes from the influencers ability to bypass the traditional advertising barriers and schemas created by our brain (Wojdynski & Evans 2020). These schemas reduce brain taxation and allow it to deploy instant responses to different stimuli. When our brain interprets "advertisement," it deploys active resistance strategies to combat them (Wojdynski & Evans 2020). Influencer schemas are found to be similar to that of a close friend than anything perceived to be "corporate" (Breves et al. 2019; Tukachinsky & Stever 2019). This close friend schema is built upon the parasocial relationship formed between an influencer and their audience (Schramm 2008). This relationship is built and further strengthened through the influencers constant production of content and repeated exposures by the audience (Lou & Yuan 2019; Lee & Watkins 2016). Over time and after continual consumption of the SMIs content, the

audience member will inherently learn personal information about the SMI and begin to form personable opinions about the SMI character (Breves et al. 2019; Tukachinsky & Stever 2019). Studies have shown that these digital mediated first impressions and opinions are formed in the same way traditional face-to-face opinions are formed (e.g., attractiveness, liking, familiarity, similarity) and, like its in-person counterpart, these parasocial relationships strengthen over time (Kelley 1950; Willis & Todorov 2006; Lee & Watkins 2016; Tukachinsky & Stever 2019). It is this perception of sincerity of character by the SMI that endears them to an audience (Lim et al. 2017).

Lou (2021) offers a new understanding to current parasocial relationship literature and the follower-SMI relationships it helps describe. These "trans-parasocial relationships," as Lou describes, are categorized by being collectively reciprocal, asynchronously interactive, and co-created between the SMI and the follower (Lou 2021). In their findings, Lou (2021) shows that audiences transfixed in these trans-parasocial relationships view SMI-sponsored posts with benign attitudes and interpret SMIs' sponsorship disclosures as admirable, genuine, and transparent. The longer these trans-parasocial relationships last, the greater the impact of the SMI persuasion between SMIs and consumers (Tukachinsky & Stever 2019). These higher stages of trans-parasocial relationships translate to higher perceived source credibility for the SMI (Djafarova & Rushworth 2017; Breves et al. 2019; Amos et al. 2008; Chung & Cho 2017). Followers are less critical of SMIs and more positively receive marketing content (Breves et al. 2019; Tukachinsky & Stever 2019). This positivity and leniency in advertisement participation prevails even in the face of advertisement disclosures. Breves et al. (2021) found, even after the Federal Trade Commission's new 2019 requirement for SMIs to divulge sponsored content

within a post caption, that followers reported enhanced purchasing intention and brand evaluations when posts contained advertising disclosures.

Influencers are not only tastemakers but are seen as brands themselves (Lee & Eastin 2020; Ki et al. 2020; Campbell & Farrell 2020). When an influencer reaches a certain level of notoriety, they become what is known as a human-brand hybrid which consumers can form emotional attachments towards in much of the same way they form attachments to traditional brands (Araujo et al. 2020; Britt et al. 2020). Ki at el. (2020) found efficacy to the human-brand hybrid conceptualization and that the strong attachments consumers develop to them positively transfer to the influencer's endorsements (Ki et al. 2020). Studies show that brands endorsed by influencers are seen as more credible, trustworthy, and knowledgeable (Berger et al. 2016). Consumers are self-reported to be more likely to follow their favorite SMIs recommendations of brands and look at them positively (Talaverna 2015; Lim et al. 2017). These emotion-laden attachments developed by consumers also leads to more emotion in their communication and greater consumer engagement behavior (Araujo et al. 2020; Britt et al. 2020). This connection to more emotion leading to a greater number of consumer engagements (likes, follows, replies) is an important connection to note in the continuation of this study.

Influencer advertising has been studied in celebrities (Kaikati 1987; Djafarova & Rushworth 2017; Jin & Phua 2014), brand community members (Kim, Sung & Kang 2014), and blogging personalities (Lee & Watkins 2016) has been shown to significantly increase consumers' positive brand attitudes and purchase intentions as well as amplify electronic word of mouth (eWOM) (Evans et al. 2017). A strength of influencer advertising on social media is its ability to target a specific segmented audience quickly and effectively for relatively low cost. SMI advertising also benefits from native advertising, a form of advertising that is created to

mimic similar content already produced by the SMI (Matteo & Dal Zotto 2015). Yet, even in the face of advertisement disclosure messaging that is now necessitated by the Federal Trade Commission, studies have shown that the effects of SMI advertising messaging are still highly effective (De Veirman & Hudders 2020; Evans et al. 2018; Lou et al. 2019; Van Reijmersdal et al. 2020).

Previous studies have demonstrated the effectiveness of SMIs as marketing outlets and that consumers form strong trans-parasocial relationships with these SMIs. At a certain stage, SMIs form into human-brand hybrids that allow for emotional connections to be formed with their audience and facilitate a larger number of consumer engagement actions. However, how this emotion plays into the SMIs persuasive messaging - and more specifically, their CSA messaging - is worth examining; over a digital space, what type of emotion leads to higher consumer engagement behaviors from the consumer?

Emotion and Online Influence

Emotion is the key driver of collective audience action (Aminzade & McAdam 2002; Goodwin et al. 2001; Jasper 2011; Taylor & Rupp 2002). As Moon (2013) stated, "emotions do not simply lurk beneath the surface of, or arise in response to, 'real' processes of social change – they drive them, impede them, shape them, and furthermore, in some situations, they constitute the substance of social power." The permeability of emotions is not subjugated to only in-person interactions, studies show that emotions are just as effective at influencing an audience via digital channels. Recent works have shown that online emotions spread and converge into a commonality across users and that it is the displayed emotions of users which leads to this convergence (Bond et al. 2012; Kane et al. 2014; Bastiaansen et al. 2009; Kramer 2014). These emotional expressions are pervasive and shown to disseminate from user to user across any

channel of computer-mediated communication (Lee et al., 2017). A 2014 experimental design showed that Facebook users exposed to higher frequency of positive or negative emotional posts mirrored the predominant exposed emotion in their own posts; this mirroring affect occurs both consciously and sub-consciously (Kramer 2014; Goldenberg & Gross 2020). Emotional intensity, or the strength with which emotions are experienced, also play a role in persuasion effectiveness (Larsen & Diener 1987). Experiments testing the persuasive effects of emotion intensity in a digital setting found that, regardless of the digitally mediated communication channel (e.g., written in a comment, viewed in a photo, etc.), emotional intensity had a direct effect in the spread of the message (Lee et al. 2017; Peng et al. 2014). Factors that can affect emotional expressions include how, when, where, and what type of punctuation is used (e.g., "!!!") (Li & Zhan 2011; Folse et al. 2016); the use of capitalizations, and the use of certain emojis (Folse et al. 2016).

The emotional appeal of a persuasive message plays a key role in its persuasive impact. When messages are framed or delivered with similar emotional overtones of the receiver, the receiver will accept the argument or persuasive appeal more intently (DeSteno et al. 2004). Petty and Cacioppo (1986) found that emotion plays a role in persuasive messaging based on the consumers ability to accurately interpret the message. If the consumer lacks the knowledge or ability to independently interpret a message's content, they will rely on outside sources (heuristics) to tell them how to interpret the message; it is at this point emotion can be used to increase persuasiveness in an online setting. In the case of social media, those heuristics can be the expertise (or perception of expertise) by the influencer, the overwhelming emotional opinion found in the comments, or the number of likes on a post. Studies have found that the use of emotional heuristics are especially important in online purchasing decisions (Hu et al., 2014;

Purnawirawan et al., 2014; You et al., 2015). Online reviews are one such important heuristic and pleasant online customer reviews lead to a higher purchase likelihood compared to unpleasant reviews (Guo et al. 2019).

Brands realize the power of online emotion and persuasion and plan their action accordingly (Goldenberg & Gross 2020). Studies have shown that brands and marketing agencies utilize user emotions to create sales agendas and will personalize content to increase user emotion which leads to more sale conversions (Pappas et al. 2017; Laurenson 2017; Pappas et al. 2016). Digital media is mediated and controlled by companies who dictate and manipulate what content is shown to its users. This approach prioritizes some behaviors over others and digital media companies are motivated to increase user engagement. To increase engagement, they will increase displayed user emotions, leading to an amplification of the frequency and intensity of user exposure to emotions and therefore emotion contagion. These effects may be further amplified by the size of digital networks (Goldenberg & Gross 2020). Emotion, also, is shown to directly affect sharing of advertising content across social media channels (Tellis et al. 2019; Akpinar & Berger 2017), and that positive emotions elicit the most share response among users (Dobele et al. 2007; Dafonte-Gomez 2014).

SMIs use emotions to build close connections with their followers and leverage that built-up equity to influence consumer action (Barbera et al. 2019; Sanchez-Fernandez et al. 2021; Kelman 2006; Tolbert & Drogos 2019). While prior research has established that it is the building of relationships that gives SMIs their consumer pull and marketing strength (Lou 2021; Tukachinsky & Stever 2019; Djafarova & Rushworth 2017), research has also shown it is the SMIs ability to wield emotions and use them as a persuasive tool that can make them particularly effective at online influence. Studies like Cardon et al. (2012) and Jennings et al. (2015) focus

inwardly on the emotions of the SMI and their results. In CSA literature, compassion and empathy have been shown to be significant motivators used by influencers to enact change (Miller et al. 2012; Shepherd & Williams 2014; Bacq & Alt 2018; Mair & Noboa 2006) and positive emotions, overall, have been shown to be key means of facilitating a social cause (Eyerman 2005; Polletta & Jasper 2001). Alternatively, Barbera et al. (2019) found that SMIs will use strong negative emotions in their messaging to mobilize an audience and direct them to unified action. Whether positive or negative, research has shown the deliberate attempts to elicit emotional reactions among audiences by SMIs (Clarke 2011; Jennings et al. 2015; Massa et al. 2017).

Literature has established that brands and SMIs will attempt to use emotionally charged messaging to cultivate consumer engagement behaviors and direct action in CSA messaging. However, the type of emotion evoked can play a part in the consumer engagement outcomes. It is important to understand how messages and emotion travel across a digital space and what are the inherent effects of channels used and the emotions received during the delivery of this message.

Multimodal Communication & Online Brand Influence

Multimodality is the use of visual messaging accompanied by verbal (or textual) messaging to elicit a more powerful message (Barbera et al. 2019). In online discourse there can be any number of communication channels that a user can interpret depending on the medium by which they are communicating. For example, in a zoom call or google hangout, the predominant forms of communication might be auditory and visual; in a twitter thread, the modes might be exclusively textual; and a snapchat message might be exclusively visual. There are many combinations but the predominant method of communication over an online space is textual

messaging and visual messaging. Advertising companies have long used multimodal communication to manipulate emotions of consumers and exploit visual imagery to show an idealized form, body, or life to the consumer in order to achieve the advertisers' economic goals (Lirola & Chovanec 2012; Unsworth 2010; Pan 2015; Yang 2019). Isolated, visual messaging and textual messaging both come with their own distinct effects that has been discussed in advertising and CSA literature.

SMIs and brands have shown the propensity to use visual communication when attempting to capture attention or stimulate a response, especially when the ideas do not wholly fit with established understandings or current communal beliefs (Meyer et al. 2018). This is due to visuals ability to be evocative of emotions and stimulate reflexive response (Wagner-Lawlor 2016). Research has found that visual imagery can be especially effective when the producer of the visual image is not prominent, known, or legitimate to the viewer (Meyer et al. 2018). This allows a brand with no previous established relationship with the consumer to puncture the consumer's conscious using effective visual messaging. As these studies show, visual messaging allows a relatively unknown brand to still elicit a meaningful emotional response in a consumer; this emotional pull – as previously discussed in the above section – is the building block for increased purchase intention, persuasion in CSA messaging, and the creation of CBRs (Pappas et al. 2017; Laurenson 2017; Pappas et al. 2016; Barbera et al. 2019; Sanchez-Fernandez et al. 2019; Kelman 2006; Tolbert & Drogos 2019).

Visual content also leads to a greater interaction between a brand and its consumers online. Studies show that brands using more expressive, aesthetically pleasing, and unique imagery received more likes and comments on Instagram (Kusumasondjaja 2019); and video content received more likes and comments than static content (Kusumasondjaja 2019). Visual

cues are also used to increase consumer emotional arousal and visual complexity was found to be a significant mediator of consumer purchase intentions (Smith 2008; Kusumasondjaja 2019).

While the research above leads to the conclusion that more unique and dynamic visual messaging will lead to an increase in consumer emotional arousal – and by extension from previous established literature, lead to more consumer interaction and relationship building – Smith (2009) found that the effectiveness of visual imagery relies on the decoding from the consumer. This decoding can be hindered by multiple barriers (e.g., cultural differences, practical and aesthetic knowledge, etc.) which, if not cleared, can render the visual message ineffective. However, video messaging incorporates several other elements that can clear these hurdles and endear them to a consumer like allowing a brand to humanize itself by putting a face to the organization; allowing for the demonstration of products and services; and video messaging is a form of multimodal communication within itself – allowing for the use of visual, verbal, and vocal messaging to be brought together (Waters & Jones 2011). Several studies within multimodal communication literature have shown that the combining of sensory channels creates a more memorable and longer lasting image in the minds of an audience (Brown 2005; Mehrabian & Reed 1968; Mehrabian & de Wetter 1987; Hall et al. 2007).

A visual message makes a brand's communication richer; it fills it with colors, tones, faces – all things that help elicit emotional responses and give meaning. Through the creation of this emotional response, advertisers and SMIs can increase consumer interaction behavior, build relationships, and act as persuasive agents in their CSA messaging (Dey et al. 2017; Sanchez-Fernandez et al. 2019; Laurenson 2017). Visual messaging acts as the attention-grabber and emotional manipulator in the advertiser's arsenal, however, it is important but acts as only one half of multimodality.

Textual discourse is important to accompany visual messaging because it helps guide interpretations (Barbera et al. 2019). Textual, while the most widespread form of online messaging, runs into the problem of user interpretation – without nonverbal cues, a message is under threat of getting muddied or lost completely (Liu et al. 2018; Prada et al. 2018). Out of this ambiguity, user-adaptions and linguistic shortcuts have evolved. For example, while nonverbal cues are not explicitly visible in written text (e.g., the frown of a face delivering a message, or the shrug of shoulders) textual paralanguage (TPLs) has emerged to act in their place (Ganster et al. 2012). TPLs are nonverbal stand-ins and defined as "written manifestations of non-verbal audible, tactile, and visual elements that supplement or replace written language and that can be expressed through words, symbols, images, punctuation, demarcations, or any combination of these elements" (Luangrath et al. 2017). Emojis and emoticons are examples of TPLs, and they are being used increasingly by brands in consumer messaging to deliver a sense of context and tone to the consumer. Findings show that brands who leverage these TPLs see an increase in consumer attitude towards the brand, greater purchase intention, and a strengthening of the consumer-brand relationship (CBR) (Hayes et al. 2020; Das et al. 2019). Emojis and emoticons are not the only textual clues brands, SMIs, and consumers, in general, use to convey a sense of emotion and intention behind their text. As discussed with emotion, punctuation is a key factor and the context which different punctuation appears (e.g., "!!!" at the end of a sentence) can dictate the interpretation of a message (Li and Zhan, 2011; Folse et al., 2016). Similar is the case of capitalizations of certain words in certain parts of a message or a different type face used counter to previous text (e.g., the boldening of a word or italicization of a phrase) (Walther 1992; Folse et al., 2016). These uses of emoticons, emojis, punctuation, and syntax give the advertiser and SMI another tool by which they can use to combat the loss of non-verbal cues and elicit an

emotional response in the consumer; and as previously established, once the SMI or advertiser can elicit an emotional response within the consumer, meaningful relationships and consumer interaction behaviors can spawn. Once these behaviors spawn, purchase intentions increase and overall message synthesis increases leaving the brand advertisement more effective (Das et al. 2019; Matthews & Lee 2018; Hayes 2020).

Walther et al. (2008) stated as long as we are human, medium of communication cannot be a barrier, users will find a way to convey depth and emotion in a way to elicit interpersonal affection as strongly as they would do offline (Walther et al. 2008; Pang et al. 2018; Marmat 2021). Textual discourse can allow for a quicker and direct response and this quicker accessibility to information reduces customer uncertainty and improves CBR (Ainin et al. 2015). While video production may take time, advertisers and SMIs can craft a comment, press release, or social media post in a fraction of the time and use them to be more direct and personal to their consumers. Combining the speed of response with textual messaging's ability to direct message interpretation and the established advantages of TPL use, it demonstrates textual communications distinct merit of study in modern advertising literature and its role as the guiding hand in multimodal communication.

The combination of visual and textual messaging channels has been studied and confirmed that multimodal messages are more effective in communicating brand messages and evoking an emotional response in its consumers (Juliana & Arafah 2018; Kim & Sundar, 2016; Barbera et al. 2019). According to Daft and Lengel (1986), the richness of a modality (how many different communication channels it operates through) is only effective if it is successful in communicating through multiple cues simultaneously, provides timely feedback, establishes a sense of personal presence, and employs varied language to communicate the message (Vickery

et al., 2004; Kusumasondjaja 2019). For example, an Instagram video post about the dangers of smoking is richer than just a picture of a cigarette. Information with a leaner modality, such as text-based SMS advertising, lacks environmental, spatial, visual, auditory, and other sensory contextual information, which may hinder communication (Kusumasondjaja 2019). However, the combination of textual messaging with video content provides the consumer with a full array of verbal, nonverbal and contextual cues that help to understand the message more clearly by offering information to their various senses (Schultz, 2017). Studies on the psychology of media revealed modality affects consumer attention (Nguyen et al., 2017), advertising persuasion (Nan et al., 2017), brand recall (Huh et al., 2015) and purchase intention (Kim & Sundar, 2016).

The study of multimodality is incidental in many cases – coming as a byproduct of a more directed focus in many studies. With so much of brand CSA messaging now being focused on digital media – and more specifically, social media – it is critical to understand the component parts of communication that make up the selected advertising platform. Instagram, for example, is a functionally multimodal-forced platform. Literature has shown that multimodal communication leads to richer messages that increase CBRs, increase purchase intentions, evokes heightened consumer emotions, and leads to more persuasive CSA messaging (Daft & Lengel 1986; Nan et al. 2017). However, the effect of emotions on consumer engagement and the combining of emotions in two channels over a digitally multimodal space still needs to be explored. This is a gap in literature this study hopes to fill, showing the importance of combining emotions in multimodal messaging on digital platforms like Instagram as it relates to consumer engagement.

Instagram as an Advertising Platform

Instagram as an advertising platform is important to study because of its inherent enforcement of multimodal posting and it being the preferred social media platform of many SMIs and brands. The annual advertising revenue for Instagram has been steadily increasing year over year; in 2020, Instagram accumulated $17.4 billion (Statista 2021). Instagram as a service also actively encourages consumers to make impulsive purchasing decisions (Xiang et al. 2016). Instagram makes consumers more prone to emotional spending (Aprilia & Setiadi 2017); studies have found that these impulsive purchases can be triggered by advertisements (Handayani et al., 2018; Triwidsari et al., 2017), posts displayed on a brands' Instagram account (Handayani et al., 2018), and recommendations from SMIs (Xiang et al., 2016; Zhu et al., 2020). Instagram is a site where images can be curated and stylized to portray an exact persona while still giving the perception of sincerity (Casalo et al., 2020; Lou et al., 2019; Sokolova & Kefi, 2020). This careful orchestration of a persuasive online persona helps SMIs attract followers, portray themselves as a field expert, and engage with an audience on an ongoing basis (Belanche et al., 2020; Ki et al., 2020; Ladhari et al., 2020).

Instagram's insistence on including both a textual and visual component in order to post is what separates it from its fellow social media platforms. On Twitter, for example, the main mode of communication is textual; the option is present to add a photo or video – but not necessary. Similarly to Facebook, a Facebook post can consist of only a textual message, only a visual message, or both – but it does not require both. That is not the case with Instagram; a post is made up of two components: a caption (textual message) and a picture (visual message). If the post does not possess both, it cannot be uploaded. The picture component of the post can take many forms: it can be a single still image, a video, or a carousel of photos (multiple photos you

can scroll through). In each iteration of the Instagram post, multimodality is at its core; it forces the consumer to decode two different messaging channels. Once a post is created, it is displayed on a consumers feed where they may interact with it (e.g., like, comment, share, or save). It is with these interaction features that a bond can begin to form with a brand or SMI; studies show that consumers will feel closer or more connected to a brand or SMI after using these interaction features (Liebers & Schramm 2019; Chung & Cho 2017; Lee & Watkins 2016). As bonds begin to form, the persuasiveness of a message begins to rise.

SMI advertising, in particular, greatly benefits from Instagram's infrastructure. Studies show that a consumers repeated visual exposure to an SMI breeds familiarity and liking (Lou & Yuan 2019; Tukachinsky & Stever 2019); and the use of Instagram's interactive features build a faux sense of personal interaction. SMIs use this built-up consumer equity to their advantage and become quite effective brand promoters; extensive research has been completed demonstrating SMIs as major persuaders and opinion leaders that actively decide consumer purchase intention (Casaló et al., 2018; Djafarova & Rushworth, 2017; Jin et al., 2019; Sokolova & Kefi, 2020). While this research would lead one to believe that SMI advertising is a no-fail proposition, new research has begun to appear that shows SMI opinions aren't as critical as it would appear to consumer purchase decisions (Djafarova & Trofimenko, 2019; Chen, 2018). SMI research on Instagram is still a relatively new proposition and it needs to be remembered that it is still evolving. This contrasting in research could be attributed to the new "#sponsored" hashtag that is required by the Federal Trade Commission finally making its mark in research. As consumers become more adept at spotting sponsored content and more aware of the money SMIs stand to make from these sponsored posts, perhaps apathy has sent in. However, studies have found that even in the presence of a disclosure of sponsorship on a post, consumers still engage with the

content (Breves et al. 2021; Lou 2021). Further studies could be conducted to compare the success rate of SMI sponsored posts and SMI advocacy that appears to be more genuine.

While plenty of recent research has been conducted studying the effects of advertisements, SMIs, and messaging on Instagram across several different scenarios (Munoz & Towner 2021; Staniewski 2022; Li 2021; Liu et al. 2021), research is limited in relation to SMI emotion in messaging and its effects on consumer interaction in the context of Instagram. Understanding how messenger emotions influence consumer interaction in a multimodal context can help fill a voided gap in literature and shed some further light on what leads to more successful messaging.

Influencers and Social Advocacy

Svirsky (2010) defines activism as "involving local instigations of new series of elements intersecting the actual, generating new collective enunciations, experimentations and investigations, which erode good and common sense and cause structures to swing away from their sedimented identities," Abers (2019) simplifies this by stating activism is "the proactive pursuit of opportunities to defend contentious causes." For the purposes of this study, a working definition of SA as it relates to SMIs can be any public call to action to bring awareness, promote change, or influence behavior of an audience in the name of common good.

The manipulation of emotions to galvanize an audience in the name of a unified goal has been a skill SMIs have become increasingly more adept at using. SMIs have the power to shape and sway a narrative, enact change, and be the spark for social movements (Grave 2017; De Veirman et al. 2017; Breves et al. 2019; Barbera et al. 2019). Activists wanting to gain support for their causes have long used visual symbols to elicit emotions, attract attention and persuade

neutral bystanders to become supporters (Christensen 2018; Doerr et al. 2013; Jasper & Poulsen 1995; McLaren 2013; Zott & Huey 2007; Jasper 2011; Barbera et al. 2019).

While the literature on SMIs central role in social activism is clear, the role emotional polarity plays and its effects on consumers is mixed at best. Research has found that the more distressing an image that a SMI uses in a relation to social activism, the more effective it is at mobilizing consumer action. Studies such as Mortensen et al. (2017); O'Neill & Smith (2014); Fehrenbach & Rodogno (2015); and Doerr, Mattoni, and Teune (2013) studied the use of jarring visuals related to humanitarian causes to attract the attention of potential supporters and found that these jarring images are particularly effective at capturing consumer attention and evoking an emotional response. The images and posts studied in these experiments were negative emotions (e.g., fear, outrage, disgust) and the successful transfer of emotion from SMI to consumer was rationalized by the increased post interaction received. Based on these findings, it could be concluded that negative emotions are most effective in CSA messaging by SMIs and brands; however, there is supporting literature that argues the opposite. Scheff (2007); O'Neill & Nicholson-Cole (2009); and Mortensen et al. (2017) found that too shocking of imagery or too negative of emotions can have adverse effects; it risks alienating the consumer, emotionally fatiguing the consumer, or "normalizing" the issue and making the visual imagery lose its sting.

Nevertheless, what is not up for debate amongst scholars is emotion's pivotal role in CSA. As Jasper (1998) and Juris (2008) outline, emotions are not an incidental byproduct of activism; emotion is strategically deployed to gather supporters, maintain ongoing action, and to reinvigorate a cause. Others argue, the truth of emotion and social activism lie somewhere in the middle and both polarities of emotion (positive and negative) have their time and place. For example, the emotional messages of Gandhi or Martin Luther King Jr. which advocated for

peace and hope are very different from the emotions advocated by Fidel Castro or Adolf Hitler. Jasper (1998) suggests that the emotional polarity a user responds to is determined entirely by the personality of the consumer, while Juris (2008) suggests that distinct type of protests require distinct type of emotions to direct action and inspire them amongst consumers. To summarize, the role of emotion in the mobilization of activism is understood. What needs to be investigated further is the polarity of emotions and its success in eliciting consumer support in CSA messaging.

Multimodality has also shown its effects in the study of SMI CSA messaging and how the platforms of social media are effective breeding-grounds for public action. Barbera et al. (2019) investigated how 'social entrepreneurs' use visual images and textual interactions together to influence their target audience to enact a difficult cause. In their findings they revealed that social entrepreneurs use visual images to evoke a strong emotional response amongst their audience to draw attention to an issue (plastic pollution in their study) and use the textual message to give direction and provide context (Barbera et al. 2019). `An important study that first outlined the framework of multimodality, emotion, influencers, and social media together in a concerted way. However, Barebera et al. (2019) specifically investigated negative emotional messaging – and as posed earlier – the question remains on the validity of positive emotional messaging in the same context. This is a gap in literature this study aims to fill: what are the differences (if any) in the effectiveness of positive versus negative emotional messaging in the context of CSA?

Professional athletes are often identified as SMIs and will routinely use their position of influence to advocate for social issues. As established in the previous literature, the strength of SMIs - and Instagram as a platform - is the ability to create parasocial relationships that form

over continual posting and are largely illusionary – or one-side dominant (Liebers & Schramm 2019; Chung & Cho 2017; Lee & Watkins 2016). These parasocial relationships can be entered into with anyone (athletes, actors, government officials) and still have the same effective pull on consumers (Schramm 2008). Previous literature also established that there are well-researched and academically supported tiers (categories) of influencers (Campbell & Farrell 2020). The celebrity influencer, specifically, fits the mold for professional athletes. Celebrity influencers are any individuals whose public recognition is predicated on achievements independent of the social media realm; if social media ceased to exist, their celebrity and status would not diminish. Social media is supplementary to this level of influencer. Industry research backs up this claim that views professional athletes as valued and credible SMIs; in a 2019 study on engagement rates of branded Instagram content, athletes recorded the highest average engagement rate at 3.9%, a number that more than doubled the next closest mark of non-athlete SMIs (1.8%) (Opendorse 2020). The sheer number of followers of the top athletes make them hard to ignore, four of the top 10 most followed Instagram accounts are professional athletes: LeBron James (@KingJames), the highest followed American-born athlete, has a follower count of 114M, as of March 17, 2022. Cristiano Ronaldo (@cristiano), the world's most followed human being has a follower count of 413M.

Athlete SMIs are seen as human-brand hybrids (Ki et al. 2020). Born from the Human brand theory (Thomson 2006), which proposes individuals can reach the status of individual brands if three conditions are met. First, distinguishable features: just as a brand's name, symbol, or product distinguishes it from competitors, so too does an individual's name, persona, or abilities. If an individual has brandable features or talents that make him unique from competitors and are the center of marketing efforts, they are in line to serve as a human brand

(Moulard et al., 2015; Thomson, 2006). Second, the human brand fulfills an individuals need of autonomy, relatedness, or competence and creates a strong relationship (Duffy, 2005; Thomson, 2006). Finally, the strong attachments built lead to effective marketing campaigns (Thompson 2006). Carlson and Donavan (2013) researched the merits of human brand theory in relation to athletes and found that they do adhere to these three standards and, as a result, experienced heightened consumer relationships that transferred to their endorsements. Ki at el. (2020) updated this research to study the efficacy of the human brand theory in relation to SMIs, the resulting findings showed that consumers do interpret SMIs as human brand hybrids and develop strong attachments to them that positively transfer to the SMI's endorsements (Ki et al. 2020).

This means that athletes are correctly interpreted as human-brand hybrids in two respects: first, in their accolades and accomplishments as an athlete. Second, in their social media pursuits as an influencer. What follows these strong attachments is trust, athletes garner extremely high levels of trustworthiness with consumers through social media (Brison et al. 2013; Jin & Phua 2014). In fact, professional athletes straddle a unique position within celebrity influencer, human-hybrid culture because they are exceptionally relatable to consumers, "athletes represent an association with a symbolic aspirational reference groups in which they serve as a point of comparison to assess their own attitudes and behaviors" (Carlson & Donavan 2009). This relatability is attributed to several factors: one being the superhero theory stating children grow up playing sports and idolize their favorite athletes (Biskup et al. 1999); another is the relatability in upbringing, many athletes come from poor upbringings and are seen as success stories who "made it." Perhaps through that lens of overcoming, it gleams some insight into the professional athlete's insistence on CSA.

Professional athletes are also highly philanthropic and use their platforms to advocate for change. Kim and Walker (2013) posed the question if the high-profile status of a professional athlete can influence third-party donations to a charity the athlete supports. The results showed that athlete image, involvement, and trust in the athlete significantly influenced donation intentions (Kim & Walker 2013). As of 2011, charities and foundations connected to professional athletes numbered 1122 in North America (Lee et al. 2011), a number that has risen considerably with the expansion of social media in the last decade. This charge for social activism starts at the top, one of the most outspoken and political athletes in the world is LeBron James. James over the past five years has become more vocal about violence, race, poverty, and has launched his own school designed for children of impoverished families (Coombs & Cassilo, 2017). This trend has grown considerably among athletes since the kneeling of Kaepernick in 2017 and then the murder of George Floyd in 2020 (Harvard Business Review 2021). Several athletes across the country, including Boston's Jaylen Brown and Portland's CJ McCoullum, led marches in their cities and shared it on Instagram. Many more posted with support for Black Lives Matter and their respective causes. Since 2020, the landscape of social media as a professional athlete has changed – there is a much larger emphasis on using your platform to better the world. Marcus Rashford MBE, a 22-year-old British soccer player for Manchester United, is another example of the good athletes do with their social media. Rashford was knighted for his campaign to feed at-risk children during the pandemic; his efforts on social media saw his foundation raise enough money to feed 1.3M children during the COVID-19 shutdown (BBC 2020).

It is for these reasons athletes are the perfect group to study in the context of this study. Their fame as celebrity-influencers elevate them to be seen as human-brand hybrids, meaning

they adhere to all established CSA literature; they are shown to generate the most interaction among SMIs on social media; and studies show they are exceptionally philanthropic and routinely post CSA messaging which has shown to persuade audience participation in the social cause.

Combining the conceptualization of professional athletes as celebrity-influencer human-brand hybrids with the previously established literature on the role of SMIs and emotion in CSA messaging, and the skeletal framework for this paper begins to take form.

Understanding the Roles of Emotion and Multimodality in Social Advocacy Influencer Messaging by Professional Athletes on Instagram

The roles of emotion, multimodal communication, SMI marketing, and CSA all converge to give us the necessary context for this study. Emotion is the catalyst for great social change and multimodal communication allows the user to invoke emotion and direct it towards the desired change (Grave 2017; De Veirman et al. 2017; Breves et al. 2019; Barbera et al. 2019). SMIs build strong relationships with their audience and professional athletes, specifically, act as strong celebrity, human-brand hybrid SMIs (Campbell & Farrell 2020; Brison et al. 2013). An SA Instagram post from these SMIs can create a groundswell of audience interaction.

THEORY

Digital Emotion Contagion

As previously stated, emotions are an important driving force behind social change and collective action (Aminzade & McAdam 2002; Goodwin et al. 2001; Jasper 2011; Taylor & Rupp 2002). SMIs use emotion to galvanize and direct an audience (Barbera et al. 2019), but how emotion transfers from one user to another is best explained by the theory of emotion contagion. Hatfield et al. (1993) defined emotion contagion as the tendency to automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another and consequently, emotionally converge. The process of adopting the observed emotions in others has been recorded as early as 1759 by philosopher Adam Smith who noted that when people express empathy, they display "motor mimicry" (Hatfield et al. 1993). Experimenters later explored how emotion triggers a physiological response, cognitive response, or behavioral response, first, which leads to action (Candland 1977; Berscheid 1979). Hatfield et al. (1993) released their study, and it became the cornerstone piece for the modern understanding of emotion contagion and its processes that much research is founded on today. In it, they define emotion contagion and clarify the driving mechanisms from which contagion occurs. The first mechanism is mimicry. Mimicry is an emotional response process of synchronizing personal behavior to those of others to elicit a positive response (Hatfield et al. 1993; Hess 2014). Mimicry typically manifests itself in facial expressions, body postures, speech patterns, and laughter (Prochazkova 2017). Second is category activation, in which an emotional category and

its responses are primed in response to emotional exposure (Peters & Kashima 2015; Niedenthal et al. 2009). Category activation does not directly lead to action, it merely makes a user more susceptible to the adoption of the perceived emotion decoded from the sender. Lastly, social appraisal is the use of other's emotions as a guide for their own emotional responses which, in turn, feed upon each other leading to similar emotional experiences (Manstead & Fischer 2001; Clement & Dukes 2017).

It seems the mode of communication does not dissuade the pervasion of emotion contagion and its three driving mechanisms as these three mechanisms are shown to drive emotion contagion across a number of communication channels including face-to-face interactions (Hatfield et al 1993), textual (Cheshin et al. 2011; Guillory et al. 2011), visual (Barbera et al. 2019), and is just as effective both interpersonally and in a large group setting (Barsade 2002; Paez et al. 2015; Beckes & Coan 2011).

However, across a digitally mediated channel – and specifically across social media – the spread of emotions and the intensity of emotions are shown to be heightened (Goldenberg & Gross 2020). People are more willing to share their personal emotions online in a more vulnerable way that affects their well-being and the well-being of those around them (Lomanowska & Guitton 2016). This is by design; Goldenberg and Gross (2020) argue. Digital media is mediated and controlled by companies who have a direct stake in ensuring emotions are heightened. These companies control and moderate what content is shown to its users and how users may interact with one another prioritizing some behaviors over others with a motivation to increase user engagement. An increase in engagement means more users frequent their platform, share with others, and stay logged on; this translates to increased revenue for the company.

Companies achieve this by upregulating user emotions, leading to an amplification of frequency and intensity of exposure to emotion (Goldenberg & Gross 2020).

The size of the digital networks also leads to a heightened sense of emotion and can be illusionary. Research shows that users will use the amount of likes on a social media post as a barometer for if the content is accepted as "correct" or understood knowledge without looking at the content of the message themselves (Bublitz et al. 2020). This can be misguided as the number of likes may be the "vocal minority," but because of no dislike button on many platforms, the true understanding of public sentiment cannot be known. One of the methods companies use to incentivize this sharing and upregulating of emotions is through the positive feedback loop of the like and share buttons (Tufekci 2013). Studies show that expressing upregulated emotions leads to more attention and likes received by the user (Alvarez et al. 2015; Brady et al. 2019). Further, the intensity of the emotion expressed directly predicts the amount of likes and retweets users received on Twitter (Goldenberg & Gross 2020). All of this helps explain the results of Kramer's (2014) Facebook experiment. Kramer manipulated the Facebook social feed content of his subjects without their knowledge and heightened the negative emotion content displayed in some feeds, and the positive content in the others. User emotion was evaluated using a dictionary-based program that counted the number of positive and negative words used by subjects. The results showed that users who were exposed to fewer positive emotions and fewer negative emotions mirrored those effects themselves and users exposed to heightened positive or negative emotions also displayed heightened emotions (Kramer 2014).

Emotion contagion is apparent in corporate communication and product attitudes, as well. An experiment designed to test emotional contagion towards product attitudes found that "receivers" of emotion will inherent a positive emotion from a "sender" that the receiver is

exposed to and likes. The emotional contagion is mediated by mimicry on behalf of the receiver mimicking a smile by the sender. Receivers being exposed to happy senders also transfer the positive attitudinal bias towards a product (Howard & Gengler 2001). A second experiment was conducted replicating the first and demonstrated that facial observation on behalf of the receiver (which allows for mimicry) was a necessary condition for emotional contagion and the transfer of positive emotion onto the product (Howard & Gengler 2001). Further studies support the positive transfer of emotions from a sender to a receiver via mimicry and these affects can even transfer from brand to brand (Isabella & Vieira 2020; Hasford et al. 2015).

Studying the effects of emotion contagion in the context of SMI marketing and CSA is an important and necessary addition to current CSA and emotional contagion literature. As the world moves further into the social media age, the opinion leaders and marketing avenues are shifting. SMIs have the ability to amass large groups of followers who form strong parasocial bonds with the SMI. SMIs are seen as more sincere, and their emotion is contagious (Li et al. 2017; Lim et al. 2017). These higher stages of parasocial relationships translate to higher perceived source credibility for the SMI (Djafarova & Rushworth 2017; Breves et al. 2019; Amos et al. 2008; Chung & Cho 2017). This source credibility is then transferred onto a brand and makes the brand appear more sincere and their message more persuasive to the consumer. This increase in sincerity and persuasiveness leads to increased action on behalf of the consumer and fosters goodwill towards the companies CSA messaging. Understanding the effect emotion plays in consumer engagement can help brands create better messages and, ultimately, build a stronger and more connected followings.

Multimodal Communication

As briefly described earlier, multimodal communication is the combining of two or more communication channels together to create a stronger and more resonate message. Multimodality has proven to be important in human communication (Partan & Marler 2005). For example, if you are walking down the street and suddenly hear someone shout "help" and you look over to see a woman pointing at you and waiving you over to her direction, you would not hesitate to come over. By themselves, the communication cues may be muddied. A "help" without the direct gesture to you might leave you confused as to who she is directing or what the situation is; a waive over by itself might leave you feeling flattered, but failing to grasp how dire the situation is. A combination of the verbal "help" and the nonverbal waive makes it clear this person needs assistance and there is no confusion that she is calling to you (maybe she has an important influencer advertising question). The point being, multimodal communication can be a combination of any two sensory channels (sound and smell, nonverbal and textual, visual and haptic, etc.) and they combine to create a stronger and more resonate message.

Over a digitally mediated field, however, the primary sources of multimodal communication will be visual and textual. In the context of CSA on social media and influencer advertising, visual and textual communication are two important channels to conceptualize as both have their own unique advantages. Visual communication (pictures and video) allow the user to be more evocative emotionally than textual communication (Wagner-Lawlor 2016). This emotional appeal can be a huge draw to new audiences, and it allows the original sender to take advantage of first impression and face-to-face interaction principles and literature (Kelley 1950; Willis & Todorov 2006; Tukachinsky & Stever 2019). Video content, even allows for the

addition of more modalities to be involved, thereby, enriching the message further (Waters & Jones 2011).

Textual communication over a digitally mediated environment is the most widespread form of communication. In the context of our specific multimodal communication of textual and visual channels on social media, it acts as the guiding hand for context and message intention. Textual messaging accompanied by a visual element help guide interpretations of said visual element (Barbera et al. 2019). This is not to say textual discourse cannot guide user emotions or be emotionally charged itself; as Walther et al. (2008) stated, a medium cannot be a barrier to human emotional expression, users find ways to facilitate these emotionally charged messages. Emojis and emoticons (Hayes et al. 2020), punctuation (Li & Zhan, 2011; Folse et al., 2016), and atypical message composition (Walther 1992) can all be intentionally used to connote emotional expression.

Multimodal communication literature is a quite active community and not for all the reasons you might expect. A sizeable portion of it has to do with the observable (and unobservable) communication patterns in animals (Darwin 1872; Beach 1951; Smith 1981; Wickler 1978; Smith & Harper 2003). Many of these studies become the building blocks for multimodal communication today. For example, vocalizations accompanied by specific visual locomotion in non-human primates were observed and studied as early as Huber (1931) and Andrew (1963). A decade later McGurk and MacDonald (1976) take those principles and demonstrate it in human adults. Partan and Marler (2005) synthesized all this information and came up with the benefits and cost of multimodal communication. The benefits being that multimodal communication allows for a larger signal range and size of potential signal receivers; the amount of information able to be transferred is larger; multiple channels allow for insurance

against noisy channels (Rand & Williams 1970; Krebs & Dawkins 1984); very important signals are more assured to be received; and that multimodal communication saves time (Partan & Marler 2005). Louwerse et al. (2011) then took multimodal communication and found that behavioral matching (or emotional contagion) is present during multimodal communication and helps facilitate a low-cost message transfer and emotional transfer through the form of mimicry.

After 2011, social media solidifies itself as, not just an up-and-coming medium of communication, but a force that dominates the communication market and a mode that deserves intense study. These new frontiers were studied by Herring (2015), exploring the new "Web 2.0" - or interactive multimodal platforms (IMPs), and robot mediated platforms (RMPs). Both avenues allow for an expansion of gestures, interaction, and message making (Herring 2015). They fall in line with Daft and Lengel's (1986) media richness theory, but her charge is more research is needed to observe if these IMP's fall in line with the ultimate outcome of the richness theory that states the more channels available, the more communication will resemble face-to-face communication.

Multimodality has been studied in advertising and CSA for its effect on message influence over the consumer (Lirola & Chovanec 2012; Unsworth 2010; Pan 2015; Yang 2019; Juliana & Arafah 2018; Kim & Sundar, 2016; Barbera et al. 2019). When dealing with metaphorical advertisements (advertisements with non-brand specific images and a short call to action placed into the advertisement image) the text is crucial for the metaphor to be assigned meaning (Forceville 2017). As Kress and Van Leeuwen (2006) highlighted, meaning making can depend on the fixing and framing: fixing refers to the communication channels assigned to message making, and framing refers to how those two channels interact together to form meaning. These channels can appear in different medias, and it will affect the way that message

is perceived (e.g., written text will be interpreted differently on tv versus a website) (Kress & Van Leeuwen 2001). Several channel and medium combinations have been studied, for example, the connection between television commercials and websites (Jessen et al. 2013), advertising images (Ly & Jung 2015), print and billboard visual imagery with CSA text (Forceville 2017), and multimodal success in political advertisement (Kjeldsen & Hess 2021); but what has not been extensively researched is multimodality's impact in SMI advertising. However, text-based, and visual-based communication have been extensively studied in advertising; understanding each by themselves can lead to further deductions on how they might work together in a multimodal environment.

Meyer et al. (2018) showed that brands and SMIs use visual communication capture the attention of an audience and stimulate an emotional response. Barbera et al. (2019) further confirmed this and proved that visual communication is especially effective at capturing attention and eliciting emotional responses in the context of CSA communication. Visual communication is so critical to all forms of brand and influencer messaging because it is proven to be evocative of emotions and stimulate an emotional reflexive response within consumers (Wagner-Lawlor 2016). Visual communication is often the first channel decoded by the consumer, leads to greater consumer interaction online, and is found to be a significant mediator of consumer purchase intention (Kusumasondjaja 2019). In the context of multimodal communication on Instagram, visual messaging is the attention grabber for the SMI. It is the primary emotional conduit that a SMI uses to influence consumer behavior.

Textual communication is the more cognitive communication between the two. Barbera et al. (2019) found that, in the context of SMI CSA messaging, textual discourse is important to accompany the visual message because it helps guide consumer interpretations. Textual

communication runs into the problem of emotional ambiguity without the assistance of nonverbal cues (Liu et al. 2018; Prada et al. 2018). However, TPLs have been shown to help bridge this divide in emotional interpretation and strengthen the relationship between brand and consumer (Hayes et al. 2020; Das et al. 2019; Li & Zhan, 2011; Folse et al., 2016).

Fortunately, studies have shown that the combining of textual and visual communication can take the benefits of both and combine them into a more powerful effect; the result is a more memorable message, and a more emotionally evocative message than either channel in isolation (Juliana & Arafah 2018; Kim & Sundar, 2016; Barbera et al. 2019; Brown 2005; Mehrabian & Reed 1968; Mehrabian & de Wetter 1987; Hall et al. 2007). The roles of visual and textual communication in a multimodal message on Instagram can be understood as follows: the visual element of the post is the attention grabber and emotional catalyst; it is the first element seen and decoded for meaning by the user. Once interpreted, the caption acts as the guide for what the consumer should do with their emotion; it delivers a direct instruction and further elaboration on how to feel. Working together, the consumer is left with a much more emotionally rich and direct message than experienced otherwise.

It is understood the power SMIs possess in gathering an audience and the strong bonds they create with them. The popular medium SMIs choose to grow this follower base, Instagram, is a completely multimodal channel; yet the research into the extent of multimodality's influence is scant. Barbera et al.'s (2019) piece is a building block and a guiding work. It's contributing variables of SMI research, CSA, emotion contagion, and social media message proliferation are all the same variables this study wishes to build upon. Within the study, Barbera et al. (2019) found that SMIs use emotionally energizing visuals to incite an audience and then use textual messaging to channel that energy into movement. This study wishes to expand upon this further,

however, the SMIs of note are professional athletes and categorized as celebrity influencers (Campbell & Farrell 2020). With multimodality a specific concentration within this study, we can analyze what type of emotion in the multimodality leads to the most successful outcomes (e.g., consumer engagement). We will also be able to track if consumer engagement correlates more closely to one specific channel (textual or visual) and if the emotion of that specific channel plays a role. This advances the multimodal literature because it will be a foundational study in understanding the use of multimodal communication among SMIs in CSA messaging.

Emotional Contagion and Multimodality in Social Advocacy Influencer Messaging

The theories of emotional contagion and multimodality are essential and truly intertwined in relation to the study of CSA messaging from SMIs on Instagram; it can be argued that you cannot have one without the other in relation to effective persuasive messaging on Instagram. The goal of influencer advertising is to leverage the close bonds influencers build with their audience in order to siphon some of that goodwill onto your product/brand (Lou & Yuan 2019). SMIs build that audience and goodwill by curating a social media persona and posting repeated content that highlights this persona and comes across as authentic. SMIs on Instagram create this constant content through multimodal visual and textual messaging. This repeated visual exposure allows audience members to make impressions of the SMI and build a close emotional bond using the heuristics of liking, familiarity, and similarity that is prolific in face-to-face literature (Kelley 1950; Willis & Todorov 2006; Lee & Watkins 2016; Tukachinsky & Stever 2019). SMIs can use this built-up emotional cache and relationship with their audience to direct action through textual messaging (Barbera et al. 2019). When advocating for social causes (CSA), the subject matter is already emotionally charged, and SMIs can use this and their reservoir of audience emotion by tapping into it with emotionally directed messaging. It is their use of visuals

and textual messaging that harnesses this emotion and then directs it into audience action Barbera et al. 2019; Breves et al. 2019). Companies and brands can also utilize these close parasocial bonds SMIs form with their audience to garner goodwill and consumer action. Studies establish that positive emotions felt toward SMIs by their audience effectively transfer to brands associated with the SMI (Talaverna 2015; Lim et al. 2017; Ki et al. 2020; Berger et al. 2016). This transfer of goodwill creates a more persuasive message for the brand and more effective CSA messaging that elicits more positive consumer emotion and engagement behaviors. Without Instagram's built-in multimodal communication, there is no SMI to gather an audience and there is no way for emotion to spread – at least not in the form present here. This is why multimodal communication and emotional contagion are interwoven together; there is no persuasive communication on Instagram without these two.

HYPOTHESES AND QUESTIONS

The goal of CSA messaging by SMIs is to bring awareness, promote change, or influence the behaviors of their audience in the name of a common good. The emotion they use to communicate that message, however, can have an impact on the proliferation and effectiveness of that message. In some emotional contagion literature, Barbera et al. (2019), van Zomeren et al. (2012), Castells (2015), and Fan et al. (2014) found that anger spreads more quickly across social media and results in more likes and retweets on twitter. This directly contradicts other emotion contagion and multimodal communication literature which states that the positive emotions, such as happiness, are much more effective at spreading from person to person (Louwerse et al. 2012; Oberman et al. 2007). However, the former set of examples exclusively deal with social media communication, while the latter deal in face-to-face communication; this is enough to expect that negative emotion messaging leads to more audience interaction than positive emotion.

H1: The negative emotion in CSA posts from professional athletes will more positively influence consumer engagement behaviors than positive emotion

As established, multimodal communication deals in two forms of communication combining. This means an audience is receiving and interpreting the message of two separate channels to form meaning; this also means, however, that users are interpreting the emotion of two different channels. In an ideal messaging scenario, the emotion of both channels is the same and makes for a clear and uniform message. If the emotions are different between the two channels, what are the outcomes? In even more complex scenarios, what if the emotional polarity

in a video message is negative, but the emotional polarity in the textual message is positive? An example might be a video of an angry woman, but the caption is something to the effect of "I wake up everyday hopeful of creating change in the world." How do users interpret this? Barbera et al. (2019) contend that in Instagram multimodal communication, the visual component is where users draw their emotion, so it can be expected that in multimodal messages with differing emotions between its channels, it will be the visual component that dictates consumer engagement behaviors.

H2: Emotion communicated via video will have a more positive influence on consumer engagement behaviors than emotion communicated via text

Just as the combining of two messaging channels leads to stronger effects, the combining of emotions that are similar in polarity should increase consumer engagement behaviors. (Juliana & Arafah 2018; Kim & Sundar, 2016; Barbera et al. 2019; Brown 2005; Mehrabian & Reed 1968; Mehrabian & de Wetter 1987; Hall et al. 2007).

H3: The combined influence of emotion communicated through video and text will lead to increased consumer engagement behaviors

While H1 deals with overall emotional valence and makes the claim that negative emotions will lead to larger consumer engagement behaviors, the type of discrete emotion that makes up that overall emotional valence (positive, or negative) should also be brought into question. As previously stated, Barbera et al. (2019), van Zomeren et al. (2012), Castells (2012), and Fan et al. (2016) found that anger is the quickest discrete emotion to spread across a social media platform and lead to the largest engagement behaviors. Leon and Trilling (2021) demonstrated that not only is there a negativity bias in relation to the sharing and engagement of political news on Facebook, but there is an oversized reaction of anger towards such posts and

that sadness is the primary discrete emotion responsible for the sharing of posts among consumers. This literature makes it clear that negative emotions generate more consumer engagement behaviors, but the question of discrete emotion specificity most responsible for the movement is still contested. This research will allow for the further testing of which, specific, negative emotion leads to the greatest consumer engagement.

RQ1: What influence do specific discrete emotions exert on consumer engagement behaviors?

METHODS

This study employed facial expression analysis and computational text analysis on the Instagram posts of 200 celebrity-SMIs over a three-year period. The celebrity-SMIs chosen to study were 200 professional athletes from four major professional sports leagues: the National Basketball Association (NBA), Major League Baseball (MLB), the National Football League (NFL), and the English domestic soccer league (Premier League). Professional athletes were chosen as a valid celebrity-SMI to study because they fit the criteria laid out by Campbell and Farrell's (2020) influencer tier list and proven to be human-brand hybrids (Ki et al. 2020). Industry research backs their merit as valued and credible SMIs in advertising, showing that professional athletes have the highest engagement rates on branded Instagram content (3.9%) – more than doubling the next closest engagement rate of SMIs (1.8%) (Opendorse 2020). Studies indicate that athletes garner high levels of trustworthiness on social media and that the endorsement of a professional athlete towards a charitable cause significantly influences the donation intentions of consumers (Brison et al. 2013; Jin & Phua 2014; Kim & Walker 2013). This influence in CSA is why professional athletes are the correct choice when studying the engagement rates of CSA messaging on Instagram.

The 50 top players from each of the four major sports leagues were selected based on player ratings from each league's respected video game franchise to obtain a variety of positions and follower counts. The list of 200 players was used to create a list of corresponding Instagram accounts via CrowdTangle (2020), a Facebook-owned tool that tracks engagement on public

content from verified and business Instagram accounts, to collect 25,304 Instagram posts from our 200 professional athletes starting from January 5, 2019, and ending August 1, 2021. The selection was then manually coded into two categories: "Social Advocacy messaging" or "Non-Social Advocacy messaging," in line with our previously established definition of SA stating posts containing any public call to action to bring awareness, promote change, or influence behavior of an audience in the name of common good is considered SA. After the manual categorization process, 2,148 posts were deemed to be about SA.

To further process our data for emotional valence and discrete emotion, video files (.mp4 or .wav) could only be used; this is due to our software, Affectiva, only being able to properly analyze video content. The 2,148 SA posts were further separated into 366 SA video posts. The final sample of data resulted in 235 posts that were tested for both video and caption emotional content.

Independent Variables

Facial Expressions. SMIs' facial expressions were analyzed using Affectiva AFFDEX, a validated, reliable resource for emotion recognition in videos (Taggart et al. 2016) with emotion detection like that identified using electromyography (EMG; Kulke et al. 2020). All expressions consisted of an algorithmic calculation of microexpressions, or action units, using the Facial Action Coding System (Ekman & Friesen 2003) that were aggregated into distinct, discrete emotions of joy, fear, anger, sadness, and surprise (iMotions 2017). In 13 accordance with threshold validation research by Calvo and colleagues (2016), these emotions were measured if they were sustained for more than one second (i.e., 25 frames) and emoted an intensity threshold of 20% (for joy), 50% (for surprise, anger, sadness), 60% (for fear), or more.

To accurately control for the duration of each video during testing, seven new variables were created: *JoyMS, AngerMS, SadnessMS, FearMS, PosMS, NegMS,* and *EngFramePerc.* Each variable was calculated using base outputs given by Affectiva AFFDEX. *JoyMS* measures the total number of milliseconds in a video where joy is displayed; it is calculated by multiplying Affectiva's "Joy Time Percentage" metric by the "Duration" metric. "Joy Time Percentage" is a percentage score indicating how much of the total video displays joy; the "Duration" metric is the total raw number of milliseconds in the video. *AngerMS* measures the total number of milliseconds in a video where anger is displayed; it is calculated by multiplying Affectiva's "Anger Time Percentage" metric by the "Duration" metric. "Anger Time Percentage" is a percentage score indicating how much of the total video displays anger; the "Duration" metric is the total raw number of milliseconds in the video. *SadnessMS* measures the total number of milliseconds in a video where sadness is displayed; it is calculated by multiplying Affectiva's "Sad Time Percentage" metric by the "Duration" metric. "Sad Time Percentage" is a percentage score indicating how much of the total video displays sadness; the "Duration" metric is the total raw number of milliseconds in the video. *FearMS* measures the total number of milliseconds in a video where fear is displayed; it is calculated by multiplying Affectiva's "Fear Time Percentage" metric by the "Duration" metric. "Fear Time Percentage" is a percentage score indicating how much of the total video displays fear; the "Duration" metric is the total raw number of milliseconds in the video. *PosMS* measures the total number of milliseconds in a video where general positive emotion is displayed; it is calculated by multiplying Affectiva's "Positive Time Percentage" metric by the "Duration" metric. "Positive Time Percentage" is a percentage score indicating how much of the total video displays positive emotion; the "Duration" metric is the total raw number of milliseconds in the video. *NegMS* measures the total number of milliseconds

in a video where general negative emotion is displayed; it is calculated by multiplying Affectiva's "Negative Time Percentage" metric by the "Duration" metric. "Negative Time Percentage" is a percentage score indicating how much of the total video displays negative emotion; the "Duration" metric is the total raw number of milliseconds in the video. *EngFramePerc* measures the percentage of frames in a video where any emotion is displayed; it is calculated by dividing Affectiva's "Engagement Frames" metric by the "Count Frames" metric. "Engagement Frames" is a total number indicating how many frames of a video displays any sort of emotion; the "Count Frames" metric is the total raw number of frames in the video.

These new variables allow for the accurate control of total video duration for each video and will be used as independent variables.

Linguistic analysis. Linguistic Inquiry and Word Count (LIWC) 2015 software was used to conduct computational textual analysis of the linguistic characteristics of the imported textual content (post captions) from the manually downloaded Instagram posts. LIWC 2015 analyzed the focal psychometric properties of linguistic content in the text by using a dictionary that consists of a corpus of over 6,000 words, word stems, and emojis (Pennebaker et al. 2015). All textual content of the manually downloaded Instagram posts was analyzed for positive and negative emotions.

Linguistic emotions were identified using the outlined LIWC algorithms and dictionaries and comprised the software-aggregated presence of textual content. Positive linguistic emotions were operationalized as text containing language used when describing positive events (e.g., love, nice, sweet) (M = 5.57, SD = 5.62), while negative linguistic emotions were operationalized as text containing language used when describing negative events (e.g., ugly, hurt, nasty) (M = 1.01, SD = 2.68; Kahn et al. 2007).

LIWC outputs a measure of a textual content's emotional valence through a *Tone* score. This *Tone* score is an aggregation of both positive and negative emotional dimensions present in a text. The algorithm outputs a number score indicative of the overall emotional valence of the text; any number higher than 50 indicates a positive emotional tone, while any number below 50 indicates a negative emotional tone.

Additionally, LIWC provides a measure for the more refined discrete emotions of happiness, anxiety, anger, and sadness. *Posemo* is the measure for total happiness present within a given text; it is calculated by finding the percentage of total words within a text that are categorized as positive (happiness) by LIWC 2015's corpus – a *posemo* score of 5.5 indicates that 5.5% of the total words within the sampled text connote happiness. *Anx* is the measure for total anxiety present within a given text; it is calculated by finding the percentage of total words within a text that are categorized as anxiety by LIWC 2015's corpus – an *Anx* score of 51.5 indicates that 51.5% of the total words within the sampled text connote anxiety. *Sad* is the measure for total sadness present within a given text; it is calculated by finding the percentage of total words within a text that are categorized as sad by LIWC 2015's corpus – a *Sad* score of 32 indicates that 32% of the total words within the sampled text connote sadness. *Anger* is the measure for total anger present within a given text; it is calculated by finding the percentage of total words within a text that are categorized as anger by LIWC 2015's corpus – an *Anger* score of 1.5 indicates that 1.5% of the total words within the sampled text connote anger. All negative emotions can be combined more broadly into a *Negemo* score. *Negemo* is the percentage of total words within a sampled text that indicate sadness, anger, or anxiety; a *Negemo* score of 52 indicates that 52% of the text is negative emotion.

LIWC measures the aggregated emotionality percentage of a textual sample with an *affect* score which calculates total number of words in a given text that signifies any sort of emotional display. These words are defined using LIWC's 2015 dictionary of more than 6,000 words and in context with the rest of the analyzed textual content. Literature above established that the discrete emotions of anger and sadness should lead to greater consumer engagement behaviors. These measures will be used as independent variables to test whether there is a correlation between specific discrete emotions and posts with the largest consumer engagement behaviors.

Combined Visual and Linguistic Emotion was measured by creating two new variables, *TotalPos* and *TotalNeg*. *TotalPos* is a calculated score representing the total positive emotion present in one post – one post is comprised of video and caption content. *TotalPos* is calculated by multiplying the "PosMSPerc" metric by the "Posemo" metric. "PosMSPerc" measures the percentage of milliseconds in a video that are comprised of positive emotion. "Posemo" measures the percentage of words within a sampled text that are categorized as positive emotion. This new variable allows for a single score representation of both video positive emotionality and textual positive emotionality present in a single post. *TotalNeg* is calculated by multiplying the "NegMSPerc" metric by the "Negemo" metric. "NegMSPerc" measures the percentage of milliseconds in a video that are comprised of negative emotion. "Negemo" measures the percentage of words within a sampled text that are categorized as negative emotion. This new variable allows for a single score representation of both video negative emotionality and textual negative emotionality present in a single post.

The above listed variables will act as our independent variables used to test our hypotheses. These new variables allow for valid experimentation while also controlling for duration and word count of a given post.

Dependent Variables

To assess consumer engagement, the *views, likes*, and *comments* were collected for each post. Each of these three metrics represent a different level of consumer commitment or engagement with a post and should be considered. A view is the most passive of the three and takes no action or effort on behalf of the consumer; a like requires some consumer action and is an endorsement on behalf of the consumer that indicates personal support to a larger audience; a comment is the most effort intensive of the three by the consumer – it is the creation of a unique thought and active participation in a conversation with a community at large. This level of effort indicates high emotional appeal and action. The three metrics of *views, likes,* and *comments* were then combined to create a fourth metric named *Total Interactions*. These four metrics were used as dependent variables by which emotion within a video or text were assessed against during experimentation

RESULTS

The results of a Poisson regression identified that the model was highly skewed, and the sample was overdispersed (df = 164917.59). Due to the overdispersed nature of social media data, a series of negative binomial regressions were employed to assess the hypotheses (df = 1.31). All analyses accounted for both the length of the video in milliseconds and the caption word count to control for variances in either of these aspects of the message.

To answer H1, this study began by examining the combined influence of negative visual and linguistic emotions on consumer engagement. A negative binomial regression was performed. In line with multimodality, the model assessed the direct influence of the product of the total negative emotion of a video in milliseconds and the negative emotional text on total interactions. The results were logged, and a similar procedure was performed to find the direct influence of positive emotion posts; the product of the percentage of total joy expressed in milliseconds of a video and positive emotional texts were assessed against total interactions. The results of the two analyses showed that positive emotion posts had a significant effect on total interactions (*B*=-3.50e-6; *SE*=1.02e-6; *LCI*=-5.49e-6; *UCI*=-1.51e-6; *p*=.001) while negative emotion posts had no significant findings. (*B*=-3.50e-6; *SE*=1.02e-6; *LCI*=-5.49e-6; *UCI*=3.39e-6; *p*=.067).

See Table 1

To answer H2, this study began by examining how the percentage of total emotionality displayed in a video directly impacted the total interactions of a post. A negative binomial

regression was performed with total interactions being the dependent variable. The modelassessed the direct relationship between engagement percentage within a video and total interactions, while accounting for our covariates. The results concluded that video has minimal influence on consumer engagement behaviors and the findings are largely insignificant (*B*=-0.01; *SE*=.00; *LCI*=-0.01; *UCI*=.00; *p*=.092). A similar test was then performed using a negative binomial regression to assess the direct influence a post caption has on total interactions. An affect score was modeled against total interactions while controlling for word count. The resulting negative binomial regression, again, indicated that caption emotionality has minimal effect on consumer engagement behaviors (*B*=.02; *SE*=.02; *LCI*=-.02; *UCI*=.06; *p*=.395). The results indicate that the vehicle by which emotion travels has negligible effect on total consumer behavior outcomes.

See Table 2

To answer H3, each of the four dependent variables (likes, comments, views, total interactions) were tested against the combined influence of video emotion and textual emotion of a single post. A negative binomial regression was run for each dependent variable. The tests revealed a statistically significant correlation between the combination of video and caption emotion of the post and the comments (*B*=-.001; *SE*=.00; *LCI*=-.00; *UCI*=-2.83e-5; *p*=.04). The other three tests were deemed statistically insignificant.

See Table 3

To answer RQ1, the study measured the influence specific discrete emotions exerted over the dependent variables. A first series of negative binomial regressions were run to test the discrete emotions of joy, anger, and sadness and their effect over the dependent variables of total interactions, likes, comments, and views in regard to linguistic content. The results indicated a

significant correlation between joy in caption content and comments (*B*=.04; *SE*=.02; *LCI*=.00; *UCI*=.08; *p*=.05).

See Table 4.1

Another series of negative binomial regressions were created to test the different discrete emotions of anger, sadness, fear, surprise, and joy's influence over total interactions, likes, comments, and views using the emotionality scores from the video data. All tests were controlled for the duration of each video. The results indicated there is no direct influence from any discrete emotion on the consumer engagement outcomes except for video anger resulting in an increase in post comments (*B*=.00, *SD* =2.80e-5, *LCI*=.00, *UCI*=-5.83e-5, *p*=.00).

See Table 4.2

DISCUSSION

The research set out to understand how multimodality and digital emotion combine in SMI advocacy messaging to influence consumer engagement behaviors on Instagram. The results at the conclusion of testing largely ran counter to the proposed hypotheses outlined in this paper but found promising results with consumer interaction, wholly, and the specific dependent variable of comments; these results can have important theoretical and practical implications in the fields of CSA and SMI marketing.

Across tests, comments routinely appeared as the variable most influenced and shown to have statistical significance. Comment activity was found to increase in the presence of positive emotion via caption, displayed anger via video, and in the presence of combined video and caption emotionality in general. Previously viewed literature like Barbera et al. (2019), van Zomeren et al. (2012), Castells (2015), and Fan et al. (2014) that state anger in social media messaging will lead to more consumer engagement behaviors and that SMI's, specifically, use angry visuals to elicit an emotional response in consumers. This manifestation of emotional response amongst consumers can be explained with the increase in comment activity as user want to actively engage in the conversation or discuss the visual they have just seen. However, the increased comment activity in response to positive caption content flies directly in the face of the above, but not unexplainable. New research has published in the CSA and crisis communication sector that states a conversational and upbeat tone are important in influencing public perception of a brand during crisis and that consumers will respond more positively to

assertive language that reinforce positive emotions (Li et al. 2022; Javornik et al. 2020), with Li and colleagues (2022) specifically researching consumer response to COVID-19 communications by brands. These findings can help explain the results of our research: our sample of CSA posts came during a particularly tumultuous time of social unrest (COVID pandemic, George Floyd protests, mask mandates, and with our sampled population of SMI's being considered human-brand hybrids, much of this established literature for brand crisis communication would also apply to them. This intuitively makes sense as consumers will look towards brands and authorities to be reassured that things will be okay. In a sense, this specific research is really a blending of CSA research and crisis communication research. In future studies, crisis communication literature should be established to the same extent as CSA literature.

The next statistically significant result found is that positive emotion has a larger influence on CEBs than negative emotion in messaging. This directly contradicts the previously established literature in our literature review and directly contradicts H1 which predicted negative emotion will be shown to have a larger impact on CEBs. However, when viewing these CSA posts made by our influencers more in the lens of crisis communication literature, some sense can begin to be made. As illustrated above, consumers tend to respond more positively towards brands who are assertive and skew towards positive emotion. Javornik (2020) even states that human conversational tone is important to influence the perception of social media observers. Still, while this gives some indication as to why positive emotion was received more positively, this literature deals with public perception and does not necessarily translate to direct consumer interaction. A further study is recommended to explore the specifics content of each

positive post to see if a theme can be deduced from those that exhibit higher comment counts than others.

Running against established literature, again, is the result of H2 (which stated that video emotion will be a stronger dictator of consumer engagement behaviors than textual emotion). The results of the test showed that there is no discernible difference in the engagement outcomes of video emotionality or caption emotionality. While literature such as Barbera et al. (2019) would lead us to believe that it would be visual content that leads to more CEBs than textual content, this finding in conjunction with H3 helps reaffirm the presence of multimodality and its strengthening effect on a message. While, individually, there was no sign of increase of CEBs due to one stimulus or the other - isolated - combined, there is evidence of an increase in comments for general emotionality valence as shown in the results for H3. This perfectly illustrates how the combining of two or more communication channels strengthens a message and its persuasive effects. This helps substantiate and validate the theory of multimodality as legitimate.

Before future research can be addressed, there are some significant limitations this study encountered that merit discussion.

Limitations

This study was exclusively limited to the use of video Instagram posts, instead of being able to incorporate still image Instagram posts as well - effectively reducing our viable sample by 83%. This limitation was due to iMotions (Affectiva) inability to process .jpg, .png, and other still-image files. As a test, our team attempted to screen record 1.5 second videos of still-image Instagram posts, crop them to only the content, and then upload them into iMotions to be processed but the resulting data showed that Affectiva could not properly read them – results

indicated there were changes in emotional readings over the course of the video when that would clearly not be the case for a still-image.

The next major limitation was the improper reading of video data by Affectiva. When finished processing, Affectiva will list a percentage score of the video accurately read for facial analysis. Less than 100% is perfectly acceptable if your video contains any portion without a human face to read; the percentage score can vary wildly from video to video depending on the content. Upon examination, our team noticed an inordinate number of videos would display sub-20% analysis, 50% analysis, or simply no analysis score at all. After further investigation, it was found Affectiva simply refused to analyze clear, unobstructed faces contained in the videos. The most extreme example being a 3% analysis score on a 90 second video of a man sitting and speaking directly into the camera; Affectiva managed to analyze the last three seconds of the video. This huge hole in an already limited sample completely changes the data of the sample. Complete emotional expressions could be omitted, and raw percentage scores of total frames displaying emotion would be incorrect.

Theoretical and Practical Implications

With the limitations addressed, if these results are deemed to be truthful and actionable, then the theoretical implications indicate that the theories of Digital Emotion Contagion and Multimodality are valid and do interact in a substantive way. The results also indicate that using more positive emotions (joy, hope, happiness) result in more CEBs than a more negative communication direction – directly opposite to previous cited works. The validity of using positive comments opens new directions brands and SMIs can use to generate attention and conversation when advocating for a cause. Still, with results that show more negative emotion video generates more comments and more positive emotion captions generate more comments

then combining the two would lead to the most fruitful outcome for SMIs. This combination also completely falls in line with the findings and experimentation of Barbera et al. (2019) who showed that SMIs use strong, negative emotion imagery to generate emotional arousal in consumers and then use the caption as a guiding hand to direct that action; the same can be applied here. A SMI can use a negative emotion video to draw attention and conversation to a topic and then use a more positive caption to inspire hope and instill confidence in the audience. The implications also indicate that the literature of CSA and crisis communication may be beginning to merge – at least in this specific study. When observing the specific sampled period and the major social advocacy themes prominent throughout (COVID-19 pandemic, George Floyd protests, national mandates, and civil marches), many of these issues became a matter of national importance and security – a factor larger than typical social advocacy. Many of these issues deemed so critical that many national brands spoke out and made company policy decisions as result of these issues – it was no longer a PR issue but a crisis communication issue in how they decided to respond to these threats in the eyes of publics and stakeholders. This reasoning can translate to our human-brand hybrid SMIs and why we had to recruit the literature of crisis communication in our discussion to help make sense with some of our findings. These issues may also be deemed "crisis communication" to many of our SMIs because they were directly affected by the issues at hand. Many of our athlete SMIs are African-American and the calls for policy reform and social action after the death of George Floyd is an issue that directly impacts themselves and their communities – no longer is it a non-threatening issue that they wish to shed light on out of the goodness of their heart but a real threat that impacts their community. The same can be said with mask mandates – no longer is it a plea to bring awareness, but a call in the name of public safety. This is where the lines between CSA and crisis communication

begin to blur and why we see the literature for both explaining the outcomes for our results. This implies that there is a connective thread between the two and an area that needs to be investigated.

Conclusions and Future Research

The final thoughts are that there are some important theoretical implications found that need to be confirmed with a retest of proper Affectiva data. There is certainly merit to this topic and proper findings could lead to the confirmation of significant theoretical and practical implications for CSA, and influencer advertising. The tests should be run again with cleaner, more accurate video data and the ability to include still-image visual into the testing sample. Once accurate results are reported and the hypotheses of this study can truly be tested, future research can take interesting directions. The theory of social appraisal immediately comes into play as the question of "do engagement metrics, themselves, influence the success or emotional influence of the influencer?" Another direction is the idea of the textual content (caption) acting as a guide map to emotional attribution. Does the guided emotion get attributed to the SMI directing it or to the brand/cause they are advocating for? Does the level of relationship to the SMI influence that attribution? Finally, the idea of CSA and crisis communication merging into one mass should be explored. At what level of importance does a cause need to reach for these two areas merge? Is it still considered CSA when the problem directly impacts you or your brand? Are there certain topics that are no longer considered social advocacy but something else altogether (e.g., political endorsements)? These and much more can be properly analyzed once the proper completion of this study has been concluded.

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Figure 1: H1 Results

	β	*SE*	*LCI*	*UCI*	*p*
Negative					
Total Negative					
Total Interactions	-4.84^{-5}	2.64^{-5}	.00	3.39^{-6}	.07
Positive					
Total Positive					
Total Interactions	-3.50^{-6}	1.02^{-6}	-5.49^{-6}	-1.51^{-6}	.00

Covariates: Word Count, Duration, TotalPos(Neg)

Figure 2: H2 Results

	β	*SE*	*LCI*	*UCI*	*p*
Video					
Engagement Time Percentage					
Total Interactions	-.01	.00	-.01	.00	.09
Textual					
Affect x Engagement Time Percentage					
Total Interactions	.00	.00	-.00	.00	.78

Video Covariates: Duration, Engagement Time Percentage; Textual Covariates: Word Count, Affect

Figure 3: H3 Results

	β	*SE*	*LCI*	*UCI*	*p*
Direct Effects					
Affect					
Views	.03	.03	-.02	.09	.21
Likes	.02	.03	-.04	.07	.49
Comments	.07	.03	.02	.12	.01
Engagement Time Percentage					
Views	-.00	.01	-.01	.01	.82
Likes	.00	.01	-.02	.01	.58
Comments	-.00	.01	-.01	.02	.56
Interaction Effects					
Affect x Engagement Time Percentage					
Views	-.00	.00	-.00	.00	.38
Likes	.00	.00	-.00	.00	.78
Comments	-.00	.00	-.00	.00	.03

Covariates: Word Count, Duration, TEXTxMS

Figure 4.1: RQ1 Results – LIWC Analysis

	β	*SE*	*LCI*	*UCI*	*p*
Direct Effects					
Anger					
Views	.04	.08	-.12	.20	.62
Likes	.07	.09	-.10	.24	.49
Comments	.34	.36	-.35	1.04	.33
Sadness					
Views	.02	.16	.28	.32	.91
Likes	.12	.16	-.20	.44	.46
Comments	-.24	.22	-.66	.19	.27
Positive					
Views	.03	.02	-.01	.07	.18
Likes	.02	.02	-.02	.06	.43
Comments	.04	.02	.00	.08	.05

Covariates: Word Count

Figure 4.2: RQ1 Results – Affectiva Analysis

	β	*SE*	*LCI*	*UCI*	*p*
Direct Effects					
Joy					
Views	2.77^{-7}	1.04^{-5}	-2.01^{-5}	2.05^{-5}	.98
Likes	-7.13^{-6}	1.07^{-5}	-.10	1.37^{-5}	.50
Comments	-1.58^{-6}	1.02^{-5}	-2.15^{-5}	1.84^{-5}	.88
Anger					
Views	2.77^{-5}	2.30^{-5}	-7.29^{-5}	1.75^{-5}	.23
Likes	-1.98^{-5}	2.48^{-5}	-6.84^{-5}	2.87^{-5}	.42
Comments	.00	2.80^{-5}	.00	-5.83^{-5}	.00
Sadness					
Views	3.89^{-6}	3.64^{-5}	-6.75^{--5}	7.53^{-5}	.92
Likes	-4.58^{-6}	-3.18^{-5}	-6.70^{-5}	-7.13^{-6}	.86
Comments	-9.79^{6}	-3.54^{-5}	-1.58^{-6}	5.95^{-5}	.78
Fear					
Views	-2.85^{-6}	1.44^{-5}	-3.11^{-5}	2.54^{-5}	.84
Likes	-2.74^{-6}	2.29^{-5}	-7.23^{-5}	-1.76^{-5}	.23
Comments	-2.47^{-6}	1.71^{-5}	-3.59^{-5}	3.10^{-5}	.89
Surprise					
Views	-5.41^{-6}	1.05^{-5}	-2.60^{-5}	-1.52^{-5}	.61
Likes	-5.19^{-6}	2.12^{-5}	2.71^{-5}	1.67^{-5}	.64
Comments	-7.66^{-6}	1.26^{-5}	-3.23^{-5}	1.70^{-5}	.54

Covariates: Duration