

LET'S GET VIRTUAL: MEASURING VIRTUAL INFLUENCER'S ENDORSER
EFFECTIVENESS

A Dissertation

by

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ABSTRACT

The use of endorsers has been an effective marketing strategy for companies to break through the advertising clutter and generate awareness for their brands. Endorsers were traditionally, celebrities, experts, and peers and then with the increase of social media use influencers were born. Now, with new technology computer generated avatars based on fictitious people have become virtual influencer endorsers. In fact, millions of dollars are being invested in the growth of virtual influencers, as more companies have started to integrate them into their marketing campaigns. Currently, there is a gap in the endorsement literature explaining virtual influencer endorser effectiveness and what characteristics make them persuasive. The purpose of this exploratory research is to fill that gap by utilizing a mixed methods approach to qualitatively evaluate how consumers process, interact, and respond to virtual influencers on social media and quantitatively test those findings to measure virtual influencer endorser effectiveness.

Study 1 featured a netnography and content analysis of five virtual influencer's branded post on Instagram. Five major themes were extracted: (1) affective parasocial interactions, (2) cognitive parasocial interactions, (3) behavior parasocial interactions, (4) foreign language, and (5) phishing. These findings indicated that consumers were interacting and responding to virtual influencers like human influencers. Further, subthemes emerged from the content analysis including consumers attitude toward the advertisement, purchase intention, and perception of virtual influencer attractiveness and expertise. Thus, Study 2 sought to further quantify these findings. Specifically, Study 2 evaluated (1) whether the presence of a virtual influencer in an advertisement increased

consumer attitude toward the advertisement and brand and purchase intention, (2) whether virtual influencer credibility enhanced their persuasiveness, and (3) whether brand-endorser fit enhanced virtual influencer persuasiveness. Study 2 featured a 2 (brand-endorser fit: good vs. poor) between subjects x 2 (Presence: with VI and without VI) within subjects' design and three multilinear regressions.

The results revealed that purchase intention was enhanced by the presence of a virtual influencer and that brand-endorser fit did not enhance the persuasiveness of the virtual influencer. Further, results indicated that the credibility dimensions were not consistent and insufficient at predicting virtual influencer persuasiveness. This study extends the endorsement literature by measuring virtual influencer endorser effectiveness. In addition, this study provides an important foundation for further exploration of virtual influencers as endorsers.

DEDICATION

To my husband, Sean. Thank you for facilitating my dream

To my mother, Karen. Thank you for demonstrating how to be a compassionate and resilient woman. Without your example, I could not be doing what I am doing today.

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All other work conducted for the dissertation was completed by the student independently.

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TABLE OF CONTENTS

	Page
ABSTRACT	ii
DEDICATION	v
ACKNOWLEDGEMENTS	viii
CONSTRIBUTORS AND FUNDING SOURCES	ix
TABLE OF CONTENTS	ixii
LIST OF FIGURES.....	xii
LIST OF TABLES	xiii
CHAPTER I INTRODUCTION	1
Operational Definitions	6
CHAPTER II STUDY 1 REVIEW OF THE LITERATURE.....	9
Endorsers.....	9
Influencers and Parasocial Relationships	16
Virtual Influencers on Instagram.....	23
Research Questions	27
CHAPTER III STUDY 1 METHODOLOGY	28
Data Collection.....	28
Virtual Influencer List	29
Virtual Influencer Exclusions	29
Number of follower.....	29
Humanlike Appearance.....	30
English Language.....	30
Instagram Profile and Length of Instagram Presence.....	30
Branded Posts.....	31
Data Analysis	31
CHAPTER IV STUDY 1 RESULTS AND DISCUSSION.....	33
Results	33
Affectionate Parasocial Interactions.....	33

Cognitive Parasocial Interactions	37
Behavioral Parasocial Interactions	38
Foreign Language and Phishing.....	39
Identification and Internalization Processes	40
Discussion	40
CHAPTER V STUDY 2 LITERATURE REVIEW	47
Theoretical Frameworks.....	48
Meaning Transfer Model.....	48
Source Credibility Model	51
Measuring Endorser Effectiveness.....	52
Attitude Toward the Advertisement	53
Attitude Toward the Brand.....	54
Purchase Intention	55
Hypothesis 1	56
The Role of Credibility in Endorsement Effectiveness.....	56
Trustworthiness	57
Expertise.....	58
Attractiveness	59
Hypothesis 2	60
The Role of Brand-Endorser Fit on Virtual Influencer Effectiveness	60
Hypothesis 3	63
CHAPTER VI STUDY 2 METHODOLOGY	64
Design and Manipulation	64
Selection of Endorser and Brand.....	65
Pretest.....	66
Stimulus Advertisement	66
Instrumentation.....	69
Measures.....	70
Sample	71
Procedures	71
Main Study	73
Stimulus Advertisement	73
Instrumentation.....	74
Measures.....	74
Sample	75
Procedures	75
Statistical Analyses.....	76
CHAPTER VII STUDY 2 RESULTS AND DISCUSSION	78
Pretest Analysis and Results	78

Main Study Results	80
Discussion	82
Virtual Influencers as Effective Endorsers (H1)	82
Impact of Virtual Influencer Credibility and Endorser Effectiveness (H2)	85
Impact of Brand-Endorser Fit on Endorsement Effectiveness of a Virtual Influencer (H3)	88
CHAPTER VIII GENERAL DISCUSSION.....	91
Implications	95
Theoretical Implications	95
Managerial Implications	96
Legal Implications	99
Limitations and Future Research.....	100
CHAPTER IX CONCLUSION.....	104
REFERENCES	105
APPENDIX A	131
APPENDIX B.....	134
APPENDIX C.....	137

LIST OF FIGURES

FIGURE		PAGE
1	Adidas Advertisement Stimuli.....	134
2	Adidas Advertisement Stimuli with Alex Hunter.....	134
3	Coca-Cola Advertisement Stimuli with Alex Hunter.....	135
4	Coca-Cola Advertisement Stimuli.....	135
5	Fly Emirates Advertisement Stimuli.....	136
6	Fly Emirates Advertisement Stimuli with Alex Hunter.....	136

LIST OF TABLES

TABLE	Page
1	Virtual Influencer Follower Comments 137
2	Main Study Demographics 138
3	Means and Standard Deviation for the Ad without Alex Hunter and with Alex Hunter 139
4	Means and Standard Deviations of Interaction Effects between PI, Stratification, Counter balance, and Brand 140
5	Mean Scores and Standard Deviations for Alex Hunter Credibility by Brand..... 142
6	Relationship Between the Credibility Dimensions and Attitude toward the Ad..... 143
7	Relationship Between the Credibility Dimensions and Attitude toward the Brand..... 144
8	Relationship Between the Credibility Dimensions and Purchase Intention ... 145
9	Standard Deviations and Correlations for Attitude toward the Advertisement and Credibility 146
10	Standard Deviations and Correlations for Attitude toward the Brand and Credibility 147
11	Standard Deviations and Correlations for Purchase Intention and Credibility 148
12	Counterbalance Group Mean Scores and Standard Deviation for Credibility Dimensions 149

CHAPTER I

INTRODUCTION

Social media's diverse and integrative platforms have redefined the digital media landscape, and in the process, have profoundly impacted the delivery and consumption of marketing messages (Schouten et al., 2019). These social media platforms enable organizations to engage in timely and direct contact with consumers to build and strengthen bonds beyond the scope of traditional and online advertising (Van-Tien Dao et al., 2014). According to Ortiz-Ospina (2019), there are 7.7 billion people in the world, and at least 3.5 billion individuals are active on social media. On average people are spending more time on social networks than watching television (Cooper, 2018). In fact, consumers are increasingly using information from social media to aid in purchasing decisions (Casalo et al., 2018). In response to the wide acceptance of social media, organizations have gradually shifted from solely advertising on traditional media platforms (e.g. television, radio and billboards) to advertising on social media platforms (Boateng & Okoe, 2015; Lee et al., 2016).

At its inception, social media advertisements were a form of internet advertisement, where consumers could interact with brands by liking or commenting on the advertisement or resharing the advertisement (Alalwan, 2018). As social media continued to grow and become more integrated in society, organizations aligned with digital endorsers to further their communicative reach (Brison et al., 2016). These partnerships were effective due to consumer's positive perceptions of the endorser transferring to the endorsed brand. The Meaning Transfer Model (MTM) suggests that

consumers transfer meanings attributed to endorsers to endorsed products (McCracken, 1989).

As more social media platforms were created, especially in the case of Instagram, users began to cultivate a following of thousands, and in some cases, millions of individuals. These users became known as “influencers” (Brooks, 2019). An influencer is someone who regularly produces valuable content on social media to a sizable number of followers (Lou & Yuan, 2019). Originally, influencers were athletes, celebrities, experts, and peers, but recently, this list has evolved to include avatars (Hsu, 2019; Influencer Marketing Hub, 2020). Avatars are computer-generated imagery (CGI) based on fictitious or real people (Mosley, 2020), and although, humans can have avatars too, brands are utilizing fictional computer-generated people to market their products (i.e., virtual influencers) (Hutchinson, 2019). Thus, virtual influencers are the newest type of endorser, where marketers are exploiting their social media presence to drive brand message and awareness.

There are both benefits and challenges to using virtual influencers. A major benefit to employing a virtual influencer in an organization’s marketing strategy is that the influencer can be completely under the organization’s control, producing constant content for consumers, resulting in more impressions than their human counterpart (Yaro, 2019). Other benefits to using virtual influencers include: (1) an indefinite attractive and youthful appearance and (2) reduced risk of scandal or misbehavior due to complete control of their actions and posts (Yaro, 2019). Companies do not have to worry about negative celebrity publicity and its spillover to the brand (Hock & Raithel,

2020). Research indicates that negative celebrity publicity can have a significant impact on an associated brand (Hock & Raithe, 2019; Wang & Kim, 2018). For example, in 2009 when Tiger Woods was caught having extramarital affairs, the scandal caused total shareholder losses of US\$ 5-12 billion (Zhou & Whitla, 2013). Virtual influencers are also more affordable than paying the high endorsement fees athletes, celebrities and other human influencers can command. Market reports suggest human influencers charge \$1,000 per 100,000 followers per post, and celebrities like Kim Kardashian West charge \$250,000 per Instagram post (Carbone, 2019).

Despite numerous benefits to utilizing virtual influencers, there may also be some challenges for firms. The rise in commercialized sponsorships and endorsements has amplified consumer's concern about endorsement relationships. Further, as a result of proliferation of insincere or misleading marketing tactics, consumers have become increasingly skeptical of commercial appeals and seek out authenticity (Charlton & Cornwell, 2019). The importance of a celebrity's authenticity has been heavily researched by marketing academics (Brown et al., 2003; Grayson & Martinec, 2004; Thompson et al., 2006). Moulard et al. (2015) found that consumers perceive endorsers as authentic when they appear to be stable or "steadfast in their words, actions, principles, and their mental and physical characteristics (p. 178) and convey rarity or "hold unique characteristics that are not easily copied" (p. 177). Since a virtual influencer is unable to actually use the product to provide a genuine endorsement their authenticity may be questioned. Thus, a virtual influencer may not be able to provide the authenticity that consumers want. However, given their lifelike appearance, consumers

may not be able to ascertain that virtual influencers are not human, and therefore, are not impacted by a lack of authenticity in the endorsement. For example, a survey of Instagram users showed that 42% of millennials and gen-zers followed a virtual influencer without realizing he or she was computer-generated (Cook, 2020). Another challenge that may arise with using virtual influencers is intellectual property rights, especially if a firm is not using an avatar created internally. For instance, when a virtual influencer who endorses multiple brands (e.g. Miquela Sousa also known as Lil Miquela), there may be ambiguity around which entity (avatar creator or companies who use the virtual influencer) owns the intellectual property (Grant, 2018).

Due to consumers' frequent use of social media, millions of dollars are being invested in the growth of virtual influencers. The Brud company, the most notable company for creating virtual influencers and creators of Lil Miquela, recently closed on a new round of financing, where they raised \$25 million at a pre-money valuation of approximately \$125 million (Yaro, 2019). Further, influencer marketing has seen a steady increase in market size over the last four years and is expected to reach \$10 billion in 2020 (Influencer Marketing Hub, 2020b). Despite virtual influencers' rapid rise in popularity and prevalence in society, there has been little empirical research conducted regarding their effectiveness as endorsers. Virtual influencers can offer an array of benefits and potentially lucrative marketing opportunities for organizations. However, empirical research is necessary to fully understand virtual influencers' reach and persuasiveness. Therefore, the empirical research performed in connection with this paper utilized a mixed methods approach, and its aim was threefold: (1) to qualitatively

evaluate consumers' interactions and responses to virtual influencers, (2) to quantitatively measure virtual influencer's effectiveness as endorsers, and (3) to quantitatively measure what contexts enhance a virtual influencer's persuasiveness. Such information is critical to brands being able to leverage virtual influencer's social media presence. Secondly, this research seeks to aid in the strategic development of integrating virtual influencers into future marketing campaigns and brand management.

Understanding consumer's perception of virtual influencers and whether virtual influencers are effective endorsers is essential for successful use of virtual influencers as a marketing tool.

In addition to assisting marketers developing successful influencer marketing campaigns, the results of this study will extend MTM. To date, much of the research supported by MTM has focused on human endorsers (Charbonneau & Garland, 2005; Dix, Phau, & Pougnet, 2010). This study extends the theoretical frameworks beyond the scope of human endorsers to consider its applicability to virtual influencers. Specifically, this investigation will explore whether consumers define virtual influencers in terms of meanings and then transfer those meanings to the endorsed product, ultimately influencing purchase intention.

Operational Definitions

Brand-Fit: The degree in which the image, personality, or expertise of the endorser fits the advertised brand (Schouten et al., 2019).

Celebrity endorser: An individual who is known or recognizable to the public (McCracken, 1989).

Expert endorser: An individual with superior knowledge about the product (Friedman & Friedman, 1979).

Expertise: Refers to the extent a person possesses the knowledge, skills, or experience to provide information on a given topic (La Ferle & Choi, 2005).

Influencer: “A content generator: one who has a status of expertise in a specific area, who has cultivated a sizeable number of captive followers—who are of marketing value to brands—by regularly producing valuable content via social media” (Lou & Yuan, 2019, p. 59).

Influencer marketing: “...a form of marketing where the focus is placed on specific individuals rather than a target market as a whole. It identifies the individuals that have influence over potential buyers, and orients marketing activities around these influencers” (Wood, 2016, p. 5).

Peer endorser: “A typical satisfied customer who endorses or demonstrates a product or service and acts as a source of information to influence the acceptability of the message” (Munnukka et al., 2015, p. 182).

Physical Attractiveness: Refers to the physical beauty of the endorser (Ohanian, 1991).

Match-up Hypothesis Theory: The characteristics of the product must “fit” with the image or meanings of the celebrity endorser (Kahle & Homer, 1985).

Meaning Transfer Model: Associative links, resulting from simultaneous activation of consumers’ memory nodes for both the endorser and the product, establish a path in the minds of consumers through which the meanings involving the endorser are expected to transfer to the endorsed product (McCracken, 1989).

Source Credibility Model: Three-dimension model that posits expertise, trustworthiness and physical attractiveness are the most critical characteristics in evaluating an endorser's credibility (Hovland et al., 1953; Ohanian, 1991).

Strong digital presence: Refers to the number of followers that an influencer has on a specific social media platform (Sudha & Sheena, 2019). Specifically, they are measured by tiers:

Macro Influencer: A step below a mega influencer, but still has a large following on social media (between 500,000-1,000,000 followers).

Mega Influencer: The highest-ranking category of social media influencer, they have over a million followers.

Micro Influencer: Someone who has between 10,000 to 50,000 followers on social media.

Nano Influencer: Someone who has between 1,000 to 10,000 followers on social media.

Parasocial Interactions: Interactions between users of media and media personae that mimic real life interactions and relations (Klimt et al., 2006, p. 292).

Trustworthiness: Refers to the level of confidence the audience has in the endorser when they deliver the message (Amelina & Zhu, 2016).

Virtual Influencer: A computer-generated avatar with humanlike characteristics, including personal backstories, who generate high quality lifelike content on social media.

CHAPTER II

STUDY 1 REVIEW OF THE LITERATURE

Endorsers

For over a hundred years companies all over the world have used celebrity endorsers to cut through the clutter of advertising and achieve positive brand effects, such as enhanced brand recognition (Arpita & Bhattacharya, 2018; Cavill, 2018). For example, the first celebrity endorsement dates back to the 1760s when Josiah Wedgwood used royal endorsements to market his pottery and chinaware (Goyal, 2018). Academics have been working to develop theories to describe, explain, and predict consumers' attitudinal and behavioral responses to endorsements since the late 1940s and every few years different findings would spark new streams of information processing research. Rudolph (1947) was first to explore the effects of advertising and cited a study that compared six types of advertising copy demonstrating that celebrity testimonials resulted in highest readership scores. Ten years later in 1957, Starch and staff found that, on average, consumers are exposed to more celebrity-testimonial advertisements than non-testimonial advertisements. In the early 1960s Colley (1961) and Lavidge and Steiner (1961) introduced the idea of hierarchy of effects, that is, the order in which things happen, with the implication that earlier effects, being necessary antecedents, are more important in explaining consumers responses to advertisements (Vakratsas & Ambler, 1999). The hierarchy concept has been integral in the development of advertising research, and the underlying pattern cognition, affect, behavior (Vakratsas & Ambler, 1999) has relatively remained unchanged. For instance, in the late 1960s, 1970s and

early 1980s researchers investigated involvement and attitude toward the advertisement, as mediating factors in the hierarchy of effects model (Batra & Ray, 1985; Burke & Edell 1989; Cacioppo & Petty, 1985; Krugman, 1965; Mitchell, 1980, 1981; Ray, 1973). This research found that the level of involvement does not necessarily indicate that one condition (low or high) is better than the other, but that the processes of communication impact are different (Krugman, 1965). Specifically, Cacioppo and Petty (1985) explained that personal relevance of the message may be the most important variable affecting response to an advertisement and likely determines a consumers' level of involvement. Personal relevance occurs when consumers expect the issue from the message to have significant consequences in their life (Apsler & Spears, 1968). Further, Shimp (1981) explained that involvement conditions influenced consumer attitude formation.

In 1979 Friedman and Friedman sought to explore the effects of different types of endorsers on different products. Friedman and Friedman (1979) identified three types of endorsers widely used in advertising: (1) the celebrity, (2) the professional (or recognized expert); and (3) the typical consumer. When evaluating how best to predict and describe consumer attitudinal change or response from the different endorsers, Friedman and Friedman (1979) considered the effects of processes of social influence. The processes of social influence utilized in Friedman and Friedman (1979) were developed by Kelman (1961). Kelman (1961) established three different processes of social characteristics, all characterized with distinct antecedents and consequent conditions. The processes are compliance, identification, and internalization. Of the

three processes two are applicable to endorsement research: identification and internalization (Friedman & Friedman, 1979). The identification process typically occurs with high consumer involvement and is when an individual adopts a behavior or attitude portrayed by another because the behavior or attitude helps the individual achieve a satisfying self-image (Kelman, 1961). The internalization process can occur with low consumer involvement and is when an individual accept influence because the induced behavior or attitude aligns with his or her belief value system (Kelman, 1961). Identification is related to likeableness and attractiveness and, therefore, is the process underlying how celebrity endorsers are persuasive and internalization is related to the perception of honesty or sincerity and thus is the process underlying how expert endorsers are persuasive (Friedman & Friedman, 1979). Peer endorsers may elicit either type of process (Friedman & Friedman, 1979).

Due to the difference in processing mechanisms, the greater effectiveness of an endorser, is contingent on the type of product being advertised (Biswas et al., 2006). Thus, generally an expert endorser is effective when the product is technically complex or the consumer needs to be assured of its functionality (Friedman & Friedman, 1979). Celebrity endorsers are most effective for low-involvement products, when marketers want to get the attention of consumers and have them transfer the celebrity characteristics to the product (Batra et al., 1996). Peer endorsers fall somewhere in-between as their influence may work through identification (if consumers perceive them as similar) or by internalization since similarity of usage may cue expertise (Friedman & Friedman, 1979).

Further, MTM and Source Credibility model support these underlying processes. Particularly, MTM explains how consumers are able to identify with an endorser by taking the meanings the consumer attributes to the endorser, transferring them to the endorsed product and then purchasing the endorsed product to be able to define their self-image. The Source Credibility Model aids in the understanding of internalization because the credibility dimensions enhance the persuasiveness of an endorser and internalization occurs when consumers adopt recommendations based upon the endorsers' credibility (specifically, expertise) (Kelman, 1961). While both The Source Credibility and MTM are valuable theoretical support for endorsement research, it is important to note that McCracken (1989) proposed the MTM in response to inefficiencies of the Source Credibility Model. Specifically, McCracken's MTM was developed to clarify the celebrity as a medium of the message and to explain how consumers develop perceptions toward the advertised message by a celebrity (McCracken, 1989). In other words, the Source Credibility Model sets forth that if a celebrity was attractive, trustworthy, or an expert that they would be an effective endorser. Friedman and Friedman's (1979) research refuted that idea by finding that celebrities, despite being attractive, were not always an effective endorser. MTM helps explain the deeper cognitive process consumers' experience when evaluating endorsers (e.g. attributing meanings to the endorser to transfer to the endorsed product), thus explaining why certain endorsers are more effective at endorsing different products.

Together this literature provides an overview of how consumers process advertisements and endorsements. Specifically, both the advertising and endorsement

models posit that advertising serves to influence three basic dimensions (or consumer effects): cognitive, affective, and conative (Lavidge & Steiner, 1961). Cognitive effects include awareness and knowledge about the endorsed product. These effects begin with creating attention and interest (Knoll & Matthes, 2017). Affective effects are the attitudes toward the advertisement and advertised product. These effects are where the consumer determines if the endorser and endorsed product are equally valanced (Knoll & Matthes, 2017) (e.g. both are positive or both are negative). Finally, the conative (behavioral) effects are the purchasing or using of the endorsed product. The recent literature provides that these outcomes do not necessarily follow a hierarchy order as previously believed (Colley, 1961), but rather the outcomes may be independently influenced by endorsers, as well as interrelated (Knoll & Matthes, 2017).

Since Friedman and Friedman's (1979) study, several scholars have explored the effects of endorsers on advertising effectiveness. Such research has demonstrated that endorsers significantly increase advertising effectiveness (Amos et al., 2015; Mowen, 1980), create favorable perceptions about the products (Ohanian, 1990), generate brand awareness (O'Reilly & Braedley, 2008) and develop brand loyalty (Osei-Frimpong et al., 2019). Because Friedman and Friedman (1979) demonstrated that different types of endorsers are effective for different products much of the endorsement literature focuses on extending this finding by evaluating the contexts in which certain endorsers are most effective. Of the three types of endorsers, celebrity endorsements are the most common marketing strategy (Knoll & Matthes, 2017).

Approximately 20% of all advertisements feature celebrities (Tiger Shark Studios, 2018). In support of this practice, a plethora of research has been dedicated to understanding celebrities or athletes as endorsers (Brison et al., 2016; Erdogan, 1999; Lou & Yuan, 2019; Silvera & Austad, 2003; Sternthal et al., 1978; Wang & Schienbaum, 2018). Mowen and Brown (1981) and Atkin and Block (1983) were some of the first scholars to explore the effectiveness of celebrity endorsers. Mowen and Brown (1981) focused on the effect of a celebrity endorser promoting more than one product. Their findings showed that consumers evaluated brands less favorably when a celebrity endorsed multiple brands. This finding prompted scholars to continue down this stream of research to further evaluate the impact of celebrities endorsing multiple brands. More recent research has demonstrated that consumers are not negatively impacted when a celebrity endorses multiple brands (Ilicic & Webster, 2011; Rice et al., 2012; Um, 2008). Um (2008) observed that consumers evaluated an endorser with multiple product endorsements with higher levels of attitude toward the advertisement, attitude toward the brand and purchase intention than an endorser who only endorsed one product. These findings were further supported in Ilicic and Webster (2011) which also found that the attitude towards the advertisement was stronger when the celebrity is seen endorsing multiple brands. Further, Rice and colleagues (2012) research illustrated that high congruence between endorser and product reduces potential negative impact of multiple brand endorsements. Atkin and Block (1983) focused on the impact of celebrity credibility on their endorsement effectiveness. Their findings validated the Hovland and

colleagues (1953) model, which posited that trustworthiness and expertise are the two dimensions of credibility sources are evaluated on.

However, seven years later, Ohanian (1990) synthesized the previous literature on source effects and found that attractiveness was also an essential credibility dimension. This modified Source Credibility Model has been a main construct in evaluating endorser effectiveness and continually found to be an effective measurability at predicting endorser effectiveness (Erdogan et al., 2001; Goldsmith et al., 2000; Spry et al., 2011; Till & Busler, 2000). In fact, these three source credibility dimensions have been found to be the most influential sources to effect purchase intention, brand attitude, and consumer's attitude toward an advertisement (Wang & Scheinbaum, 2018). The Source Credibility Model also supports the underlying premise that expert endorsers will be effective endorsers for products through which consumers perceive they have special knowledge (Friedman & Friedman, 1979). There are times in the literature when celebrity and expert endorsers may be the same (Kahle & Homer, 1985; Ohanian, 1990), but not all experts are celebrities. When a celebrity is also being used as an expert, it is important for marketers to add cues into the advertisement indicating the expertise, so consumers go through the internalization process rather than identification process.

Like expert and celebrity endorsers, research has focused on peer endorsers' personal characteristics as a means to measure effectiveness (Friedman & Friedman, 1979; Munnukka et al., 2015). Specifically, the use of peer endorsers is suggested to be linked to the attractiveness (similarity) dimension of credibility (Ohanian, 1990). Munnukka and colleagues (2015) examined the effectiveness of peer endorsements by

measuring their perceived trustworthiness, expertise, similarity and attractiveness. The study found that all of these dimensions, trustworthiness, expertise, similarity, and attractiveness contributed positively to the attitude toward the advertisement, which had positive effects on consumer's attitude toward the brand (Munnukka et al., 2015). The found persuasiveness of a peer endorser reflects the widely held belief that individuals who are admired and respected by a group of people can exercise an influence on information processing, attitude formation and purchase behavior (Bearden et al., 1989). This type of endorser is similar to that of influencers; where an influencer has amassed admiration and respect from their followers based on the content they produce (Bendoni & Danielian, 2019). With consumer's spending more time on social media, brand managers needed to alter their marketing plans to include influencers to further their communicative reach (Brison et al., 2016).

Influencers and Parasocial Relationships

In an era of advertisement overload and ad-blocking, brand managers are turning to influencer marketing to get their message to consumers (Global Yodel, 2016). Influencer marketing is the “action of promoting and selling products or services through people (influencers) who have the capacity to have an effect on the character of a brand” (Global Yodel, 2016, para. 5). It is a marketing strategy that utilizes key individuals' social media presence to drive brand message and awareness (Lou & Yuan, 2019). For instance, Nike signed a \$1 billion lifetime deal with Cristiano Ronaldo, a prominent soccer player, to not only capitalize on his likeness, but also his reach on social media (Mediakix, 2020). Influencers can be celebrities, athletes, experts, or ordinary

individuals, just someone with a strong digital presence. Strong digital presence has been measured by the influencer's audience size or number of followers (Sudha & Sheena, 2017). Research has suggested that reach and effectiveness can differ based on number of followers (Torossian, 2020). Thus, influencers are put into different categorical tiers based on their number of followers: (1) mega, (2) macro, (3) mid-tier, (4) micro, and (5) nano (Walker-Ford, 2020).

Influencer marketing provides a unique opportunity for companies to communicate messages about their products and services through influencers (Woods, 2016) and research shows that influencer endorsements are more effective and persuasive than professionally generated brand advertisements on consumers' purchase intentions (Kirkpatrick, 2016; Swant, 2016; Woods, 2016). For example, Kirkpatrick (2016) found that the return on investment with respect to influencer marketing is 11 times more on return on investment than other forms of traditional advertising. Return on investment was measured in terms of reach, engagement and ultimately sales. In other words, companies are making \$5.20 for every \$1 spent on influencer marketing (Influencer Marketing Hub, 2020a). Additionally, when compared to celebrity endorsers, influencers were found to have a greater impact on attitude toward the advertisement, attitude toward the brand, and purchase behaviors of young consumers (Chiu, 2018; Djafarova & Rushworth, 2017; Lim et al., 2017; Schouten et al., 2019). For instance, a recent study showed that nearly 40% of Twitter users have purchased a product because of an influencers tweet (Karp, 2016).

Influencer marketing has been successful because social media platforms provide environments for its users to connect parasocially: social interactions require reciprocity, whereas parasocial interactions are one-sided (Horton & Wohl, 1956). However, parasocial relationships share the same characteristics as social relationships and therefore are viewed as an extension of real social behavior rather than a substitute for it (Yuksel & Labrecque, 2016). Ever since Horton and Wohl (1956) developed the concept of parasocial interactions (PSI) and parasocial relationships between media users and media persona, “the assumption that users of media offerings respond to media personae similarly to how they feel, think and behave in real-life encounters” (Klimt et al., 2006, p. 292) has been heavily investigated (Cohen, 2009; Giles, 2002; Labrecque, 2014; Schramm & Hartmann, 2008; Tian & Hoffner, 2010). Chung and Cho (2017) explored consumer’s interactions with celebrities on social media to evaluate their effect on celebrity endorsement. Their research found a direct relationship between social media interactions and parasocial relationships. Meaning the more interactions between the consumer and celebrity the more likely a parasocial relationship was to form. These findings were also supported in Labrecque (2014) and Cohen and Tylor (2016). Labrecque (2014) provides insight into understanding how consumer-brand relationships are established through social media. Specifically, this study found that interactivity is an antecedent to parasocial relationships and such relationships can be enhanced with message cues aimed at inducing PSI (Labrecque, 2014). However, PSI effects may be diminished if consumers feel the brand's response is automated and not personal (Labrecque, 2014). Likewise, Cohen and Taylor (2016) found that celebrities' use of

ghost-tweeters reduced PSI, suggesting that consumer's desire direct and personal interaction with the influencer. Currently, the literature does not explore whether consumers perceive interactions with virtual influencers as personal; this study seeks to provide guidance to evaluate those interactions and determine whether it is possible for consumers to build relationships with virtual influencers, as they do human influencers.

Research has shown that brands can benefit from fostering a parasocial interaction experience online through the use of interactivity and openness in communication (Yuksel & Labreque, 2016). These parasocial interaction experiences with brands can result in increased loyalty and trust (Labrecque, 2014). Yuksel and Labreque (2016) found that consumers connect with influencers through cognition, affection and contative (behaviors). These findings align with those in the advertising and endorsement literature explaining how consumers process advertisements or endorsements (Colley, 1961). With cognitive parasocial interactions, "Cognition refers to thoughts, beliefs, attributions, rationales, values and all that comes to be known or believed through perception" (Cohen, 1999, p. 362). Klimt and colleagues (2006) explained that media consumers interact with media persona cognitively through responses such as comprehension and reconstruction, anticipatory observation, evaluations and construction of relationships between persona and self (Yuksel & Labreque, 2016). For example, consumers show an interest in the media persona's career or are attentive to the post. Affective parasocial interactions are users' empathetic reactions and mood contagion (Klimt et al., 2006). This is how users connect emotionally with a media persona. Behavioral parasocial interactions are real mimics,

gestures and verbal utterances (Klimt et al., 2006). This includes purchase intention behaviors. As consumers experience these parasocial effects (cognitive, affective, and behavioral), Kelman's (1961) social influence processes are facilitating their attitude change.

Despite similarities in the processes at understanding consumer responses to advertisements and social media persona, influencers are different from traditional celebrities and their posts are unique from traditional advertisements (Avidin, 2016). Research has shown that bloggers with strong digital presence are more likeable (De Veirman et al., 2017) and their endorsements are more appreciated by consumers than traditional advertisements (de Vries et al., 2012). Compared to celebrity endorsements, influencers are regarded as more credible, trustworthy, knowledgeable, and sincere in delivering and demonstrating endorsed products (Berger et al., 2016). This is largely due to their amiability to build parasocial relationships and rapport with their followers, especially younger generations. In fact, using influencers in marketing campaigns has been found to be the most cost-effective and effective marketing tactic (Harrison, 2017; Patel, 2016; Talaverna, 2015).

While there is industry research to support the effectiveness of influencers as endorsers, there is sparse academic literature examining their effectiveness (Grave, 2017). So far, researchers have evaluated the impact of influencers from the perspective of brands (e.g., Enke & Borchers, 2018; Kapitan & Silvera, 2016), influencers (e.g. Carter, 2016; Kim et al., 2017; Pedroni & Pofi, 2018) and consumers (e.g. Djafarova & Rushworth, 2017; Johnstone & Lindh, 2018). The majority of these studies focused on

one or two effects and corresponding variables. In particular, these studies identified variables and cause-effect relationships, but given the limited literature these effects were only examined once, indicating that more research is necessary to generalize and fully explain the effects of influencers (Sundermann & Raabe, 2019). Through qualitative research this study also seeks to uncover how users are interacting and interpreting virtual influencers on Instagram and adds to the current literature by specifically identifying what variables consumers are using to evaluate and interact with virtual influencers. These findings will then be further analyzed and quantified in Study 2.

Despite limited literature, the current findings on influencer effectiveness start to frame a comprehensive view of the impact of influencers in marketing (Sundermann & Raabe, 2019). Kapitan and Silvera (2016) were the first scholars to reference influencers as celebrity endorsers. For their investigation they integrated persuasion literature and relied heavily on consumer attributions and Kelman's (1961) processes to explain influencer endorser effectiveness. Specifically, Kapitan and Silvera (2016) proposed that the attributions consumers make while viewing the advertisement are essential drivers of endorser effectiveness. Within their framework consumer attributions lead consumers down the path of either identification or internalization (Kelman, 1961). Their research created a conceptual framework for influencer endorser effectiveness based on the existing research of traditional celebrity endorsements and information processing mechanisms. Similar to other types of endorsers, Kapitan and Silvera (2016) argued that endorser effectiveness is dependent on the personal characteristics and attributions the

consumers make about the authenticity of the endorser. However, Grave (2017) further narrowed this conceptual model finding that similarity and trustworthiness were the more critical variables at evaluating influencer endorser effectiveness. Thus, suggesting that influencers may be more effective to an audience that is familiar with them (e.g. their followers). Followers are able to establish familiarity and build trust with influencers on social media because of the interactivity of the platform.

Lim and colleagues (2017) further extended influencer research by evaluating influencers effect on consumers' attitude and purchase intention. Relying on social learning theory (Bandura, 1963). Lim et al. (2017) found that consumers derive motivations and consequently exhibit favorable attitudes from socialization agents via either direct or indirect social interaction. In other words, consumers' behaviors or attitudes are learned from the environment through observational learning processes and interactions. Thus, interactions between influencers and consumers on social media are foundational for effective marketing campaigns.

Marketers have recognized the effectiveness of utilizing influencers in their marketing mix (Hwang & Zhang, 2018). Carter (2016) explained that the rationale for consumers engaging with influencers is “to avoid the obvious endorsements of celebrities and social media users who are known to promote products” (p. 7). Further, the accessibility of influencers online enhances their effectiveness as a powerful opinion leader (Agarwal et al., 2014). Given the marketing success of influencers and rise in artificial intelligence, brands started to develop their own avatars to become virtual influencers (Sorilbran, 2019). Virtual influencers give brands high quality advertising

and capture similar engagement as influencer marketing, without the risk of scandal (Bradley, 2020). In other words, brands can not only create the perfect brand ambassador, but also have the opportunity to develop a deep emotional relationship with their audience (Bradley, 2020). Virtual influencers are engaging online personas who act human. Their lives are aspirational--having hit songs, interviewing celebrities, and starting clothing lines. Their curated stories spillover to the real world where consumers can hear their songs, buy their merchandise, or see them on covers of magazines (Sorilbran, 2019). Virtual influencers coupled with compelling backstories and the functionalities of Instagram make it possible to blur the lines between fiction and reality. The literature indicates that since virtual influencers offer key attributes, such as openness, relatability, immediacy, and attractiveness they could be effective endorsers.

Virtual Influencers on Instagram

Virtual influencers are rising in popularity and have almost three times more engagement than human influencers on Instagram (Hutchinson, 2019). The increase in popularity of virtual influencers is partly attributed to the rise of Instagram, which is an ideal medium for virtual influencers to visually establish their brand (Prosser, 2019). To create a virtual influencer, companies use social listening techniques that employ machine learning analysis to conduct intensive research into the tastes and attitude of their target market (Bradley, 2020). The personality or backstory of the virtual influencer is built based on this data. Each virtual influencer is given a life cycle, or a series of story arcs that brand managers use to develop them and make them more engaging to followers. The design team at Brud, a company that specializes in artificial intelligence

and robotics, explained, “it’s a journey that we want to take the character over about five years; we break that down into smaller blocks and then into content calendars of about three months each” (Bradley, 2020, para. 18). Currently, virtual influencers are utilized in different ways, some organizations have elected to build their own virtual influencer fully dedicated to be an ambassador for their brand and others have elected to use an existing virtual influencer, like Lil Miquela, to build awareness about their brand. The latter option is more prevalent (Bradley, 2020).

Although virtual influencers are non-human, at first glance they appear human due to their lifelike appearance and storytelling profiles (Prosser, 2019). Further, the functionalities of Instagram, such as interactivity and immediacy, and an intimate communication style, create an ideal environment for fostering parasocial relationships (Labrecque, 2014). With the help of artificial intelligence and automated software, avatars are able to generate quick and personal responses to consumers. Frequent messages woven with personal information enhance psychological proximity and intimacy, which enable further development of friendship (Chung & Cho, 2017). Advancements in technology, particularly in machine learning to mine social media messages, give brands the ability to respond to consumer messages in a timely manner. It is this level of responsiveness (Labrecque, 2014) paired with a humanlike avatar (Nass & Moon, 2000) that empowers virtual influencers to be effective endorsers. Specifically, this technology gives virtual influencers an advantage because they can respond quicker with personal messages to consumers than human influencers avoiding diminishing parasocial effects (Labrecque, 2014).

Moreover, previous influencer research has found that parasocial interactions between users and influencers facilitate cognitive, affective and behavioral effects through the processes of identification and internalization (Kapitan & Silvera, 2015; Yuksel & Labrecque, 2016). Research shows that human interactions with computers or robots are fundamentally social and natural, just like an interaction in real life (Reeves & Nass, 1996). In fact, individuals will automatically apply the same social rules in their interactions with computers as they do interacting with humans (Nass & Moon, 2000). Thus, this research seeks to evaluate whether virtual influencers can have similar parasocial interactions resulting in cognitive, affective, and behavioral effects. Specifically, relying on advertising literature, this study compares consumer responses in reality to virtual reality. Literature supports that parasocial interactions are possible with influencers on social media and that human interactions with robots are social and natural, as a result suggesting that virtual influencers are capable of parasocial interactions with humans.

Similar to the concept in parasocial interaction theory, where parasocial interaction grow when consumers forget the relationship is not real (Horton & Wohl, 1956), the concept of presence enables consumers to forget the virtuality of the experienced interaction (Lee, 2004). Presence can be achieved through frequent posts and responses to perpetuate the blurred line between reality and advertising. Meaning, when virtual influencers are photographed at actual events or posting about current issues consumers may feel that they are part of the real world. It is the process of capturing followers, increasing their involvement (Krugman, 1965), and creating a social

presence that plays a critical role in shaping consumers' social responses to computer-generated avatars (Lee & Nass, 2004). Since virtual influencers exhibit anthropomorphic cues that are related to human characteristics, they may be perceived as more human than computer.

Existing literature supports that influencers can create parasocial interactions with followers on Instagram because of its dynamic and interactive features (Labrecque, 2014). These parasocial interactions create cognitive, affective and behavioral effects and enable users to process virtual influencer endorsements through either identification or internalization (Kelman, 1961). Given the novelty of virtual influencers, there is limited research dedicated to understanding the mechanisms through which consumers perceive and interact with virtual influencers. An understanding of users' perceptions and interactions of virtual influencers on Instagram will represent the first steps toward a comprehensive understanding of the effectiveness of virtual influencers as endorsers. Particularly, whether users' parasocial interactions with virtual influencers follow a similar pattern as human influencers, eliciting cognitive, affective or behavioral effects resulting in either identification or internalization.. This study addresses aspects not answered in extant literature, seeking to determine whether virtual influencers are persuasive endorsers and what characteristics make them persuasive. Prior literature indicates that an understanding of consumer parasocial interactions and the processes through which consumers define and interpret virtual influencers will illuminate how virtual influencers can be persuasive endorsers. Thus, guided by extant literature, the following research questions were developed:

RQ1: What consumer patterns of parasocial interactions with virtual influencers on Social Media exist?

RQ2: What social processes are consumers using for their interactions with virtual influencers on Social Media?

CHAPTER III

STUDY 1 METHODOLOGY

Instagram is one of the fastest-growing online social media platforms, and research has shown that individuals spend more time on Instagram than other similar sites (Khan, 2018). Further, industry studies show that Instagram is the platform preferred by brands and that influencers believe they get the best engagement from Instagram (Sharma, 2019). For example, 90% of influencer campaigns utilized Instagram in their marketing mix (Influencer Marketing Hub, 2020). Additionally, studies have shown that influencers can create parasocial interactions with followers on Instagram because of its dynamic and interactive features (Labrecque, 2014; Molin & Nordgren, 2019). Despite the popularity of Instagram, it has not attracted much attention from marketing scholars as a research context, where most of the literature has focused on Twitter, YouTube, and Facebook as marketing platforms (Clavio & Walsh, 2014; Filo, Lock, & Karg, 2015; Haugh & Watkins, 2016; Vale & Fernandes, 2018). The purpose of this study was to draw from qualitative data to (1) analyze the parasocial interactions and relationships between virtual influencers and their audience and (2) ultimately design quantitative items to be used in Study 2.

Data Collection

Adopting a grounded theory methodology (Glaser & Strauss, 2009), this study employed netnographic data collection (Kozinets, 2010) and content analysis to identify the parasocial interactions between virtual influencers and their followers and explore what insights can be gleaned for marketing research. Netnography is an adaptation of the

traditional ethnographic research method for the examination of online communities and how individuals interact (Kozinets, 2010). The unit of analysis was the content of virtual influencers Instagram profiles and the coding units were the individual comments made by followers. The data was collected for all branded posts between March 31st, 2019 and March 31st, 2020. This time period represents the peak of virtual influencer campaigns being utilized on social media (Influencer Marketing Hub, 2020).

Virtual Influencers list

To perform the netnography and content analysis, a list of virtual influencers was compiled from an internet search, utilizing the following keywords: “virtual influencers,” “top virtual influencers,” “virtual influencer engagement,” and “digital influencers.” Results were obtained from the subsequent websites: influencerdb.com, hyperaudit.com, socialmediatoday.com, thedrum.com, and interestingengineering.com. The search yielded a list of 30 virtual influencers at the varying influencer tiers. There was one virtual influencer at the mega tier, none at the macro tier, eight at the mid-tier, seven at the micro tier, and thirteen at the nano tier. One virtual influencer did not have enough followers to be associated with any tier and subsequently was removed from the list.

Virtual Influencers Exclusions

Number of Followers. Industry research shows that influencers with less than 100k followers make up the fastest-growing sector of the influencer community (socialpublic, 2020) and that these tiers of influencers (micro and nano) have higher engagement rates than mega influencers (Influencer Marketing Hub, 2020).

Accordingly, brands are moving away from mega influencers to utilizing micro influencers in their campaigns because these influencers are found to be more relatable and trustworthy (Hosie, 2019) and have higher conversion rates (Chung, 2020). Thus, mid-tier, micro, and nano virtual influencers were selected for this study because these influencer tiers represent the trends of influencer marketing. As a result, one influencer was removed from the list.

Humanlike Appearance. Next, the influencers were analyzed to determine whether they had humanlike features. It is the humanlike features that make virtual influencers relatable to their human audience (Prosser, 2019; Trephany, 2019). The humanlike characteristics also help facilitate parasocial relationships, which have been found to ultimately influence consumer's purchase intentions (Labrecque, 2014; Matenga, 2019). Based on this criteria, two virtual influencers were removed from the list.

English Language. Since the largest following of virtual influencers is the United States (hyperaudit, 2020), virtual influencers who did not post in English were removed from the list. Based on this exclusion criteria, six virtual influencers were eliminated.

Instagram Profile and Length of Instagram Presence. Virtual influencers were removed from the list if they did not have an Instagram profile or have an Instagram profile for at least a year. Prior research has focused on other social media platforms and this research was intended to extend the literature to include Instagram as an endorser platform. Based on this criteria, one virtual influencer was removed from the list.

Secondly, virtual influencers were required to be on Instagram for a year to ensure an equal data collection timeframe among virtual influencers. As a result, five virtual influencers were removed for not being on Instagram for a year.

Branded Posts. Lastly, virtual influencer posts were examined to determine if they had branded posts. Since the purpose of this content analysis was to analyze the effectiveness of virtual influencers as endorsers, branded posts are a necessary element.

Branded posts were defined as a:

creator or publisher's content that features or is influenced by a business partner for an exchange of value...Our (Instagram) policies require creators and publishers to tag business partners in their branded content posts when there's an exchange of value between creator or publisher and business partner (help. Instagram.com, 2020, para 1).

Based on this definition, each virtual influencer's posts were examined for tagged business partners. As a result, seven virtual influencers were removed from the sample. One influencer, Brenn Gram, had branded posts, but the posts were not within the timeframe of data collection for this study. After eliminating virtual influencers based on the preceding requirements, five were left; Shudu Gram (Mid-tier), Bermuda (Mid-tier), Liam Nikuro (Micro), Dagny (Nano), and Amanda Bims (Nano). These accounts yielded a total of 51 branded posts and 1,313 follower comments.

Data Analysis

A content analysis was utilized to elicit themes from the followers' comments. This method allows for unobtrusive or nonreactive examination of content after it has

been produced. In turn, researchers are able to draw inferences about the content without making the communicators self-conscious or reactive to being observed while responding (Riffe et al., 2005). Since the nature of this study was exploratory, categories were not created prior to the examination of posts. By using an inductive category development approach (Mayring, 2000), the resulting categories “flowed from the data” (Hsieh & Shannon, 2005, p. 1279), allowing for a deeper analysis of the latent content (Granheim & Lundman, 2004). During the analysis, the researcher was mindful in the development and evaluation of the codes to ensure that the higher-order themes (i.e., consumer’s perceptions) were a function of consumers’ opinions and perceptions. Aligning with the methodology set forth in Kozinets (2002), the researcher observed the dynamics within each virtual influencers branded post and recorded data regarding her observations of the virtual influencers and their audience, interactions, and meanings. All the data from the Instagram profiles was coded and analyzed. After the emerging themes began to repeat (Glaser & Strauss, 2009), the findings from the content analysis were later used to construct a questionnaire to further analyze and quantify the parasocial interactions between virtual influencers and their audience in terms of advertising outcomes. A total of five major themes were identified.

CHAPTER IV

STUDY 1 RESULTS AND DISCUSSION

Results

Based on the content analysis, five major themes were found. The five themes were (1) cognitive interactions, (2) affective interactions, (3) behavioral interactions, (4) foreign language, and (5) phishing. As shown in Table 1 below, 61% of the comments analyzed were affective interactions, followed by 13% behavioral interactions, 10% foreign language, 10% phishing, and 6% cognitive interactions.

The data showed that consumers are having parasocial interactions with virtual influencers on Instagram, similar to parasocial interactions between consumer and human influencers (RQ1) (Yuksel & Labrecque, 2016). Specifically, the analysis found that users have cognitive, affectionate, and behavioral parasocial interactions with virtual influencers. All of the categories are defined and explained in detail.

Affective Parasocial Interactions

The literature defines affective parasocial interactions as empathic reactions or ways that users interact affectionately with media persona (Klimt, 2006). Consistent with this definition, user comments showed instances where they empathized, were inspired, or their mood was impacted by the virtual influencer. Additionally, these comments illuminated users' perception of virtual influencers. Thus, comments included under this theme were users expressing their feelings towards the virtual influencer. Twenty-two percent of the comments analyzed were positive comments about followers' perceptions of the influencer. These comments included followers posting heart emojis or comments

like “still think you the best digital model,” “so cool,” “Bermuda is BAE,” and “aaaaahhh awesome.”

Ten percent of the comments showed negative affective responses (e.g. irritation, anger) These comments encompassed followers saying things like “raising beauty standards to an inhuman level is not healthy for us,” “This makes me sad” and “there’s too many of these digital/fake people all y’all gotta go.” Additionally, some followers expressed concern about using a virtual influencer in place of a human influencer. For instance, followers posted, “I just wish someone real got her position because there are a lot of women that are beautiful and ugh it’s just sad that a robot can get so many people’s attention,”

The digital models are going to replace all the actual human models in the fashion system in 50 years, because a digital model can reach perfection and be adaptable every time and cheaper and produce more than a normal human. This is the future but is not ethically correct and there is not law that is protecting us from this threat still.

and “this virtual stuff are gonna take over the world and live no place for humans how are human models going to earn a living if u guys are making such stuff like @shudu.gram.” These comments are interesting because despite the negative connotation, they also demonstrate that individuals have accepted avatars into our world as permanent objects. While there is some objection and frustration to the use of digitally created avatars, it also shows that individuals believe avatars will be just as effective, if not more so, than humans.

For example, one follower commented “Kim who? Kylie where? Bermuda? uhm here and flawless.”

Comments like those above substantiate prior research that human interactions with robots are fundamentally similar to their interactions with other humans (Reeves & Nass, 1996). Whereas humans have accepted virtual influencers as a viable substitute to human influencers. More specifically, there is evidence to support the idea that the interactions consumers are having with the virtual influencers enable consumers to forget the virtuality of the interaction (Nass & Moon, 2000). For instance, one consumer commented “wish you went with me” and another said “Wait..are you gonna be there...? in person???” Consumers are also sharing emotions and bonding with the virtual influencers by finding similarities with the avatars and connecting with their personalities. This was shown through consumers commenting about the avatars style and their daily activities. One consumer said in response to a virtual influencer’s post about attending an outdoor movie “omg I was there too love that movie!” and another wrote “I’m obsessed with your style.”

Additionally, two sub-themes emerged in the affective parasocial interactions category, including perception of virtual influencer attractiveness and expertise. Nineteen percent of users’ comments discussed the virtual influencer’s physical appearance. Sixteen percent of the comments were positive compared to 3% that were negative. The positive comments included: “why u so handsome bby”, “pretty,” “she’s perfect,” “you look great, Amanda,” “sexy,” “she is beauty, she is grace” and “ugh perfection.” Negative comments included: “that looks more like a sim then a person

lmao” and “she’s built like an avatar character.” The literature supports the importance of perceived attractiveness as a predictor in influencer effectiveness (Bendoni & Danielian, 2019; Munnukka et al., 2015). Specifically, consumers’ attitude toward the virtual influencer (perception of attractiveness) can impact attitude toward the advertisement and brand (Knoll & Matthes, 2017). Here, it was clear that users are interpreting and analyzing virtual influencers attractiveness when forming their opinion and perception toward the virtual influencer. Similar to users evaluating virtual influencers attractiveness in their interactions, they also considered their expertise.

Approximately 10% of total comments analyzed included users debating whether virtual influencers had the expertise to endorse a product or brand. Particularly, the users focused on the nonhuman attributes of the virtual influencer. These comments exemplify the fact that since virtual influencers lack the ability to try products and provide a genuine endorsement (Moulard et al., 2015), they may not be able to be defined as experts. For example, followers commented: “oh no another fake human,” “robots can eat?” and “robots can get tan?” These comments show that consumers are aware that virtual influencers cannot actually use the products or services being endorsed in the post, potentially exposing a major challenge for brands wishing to use virtual influencers as endorsers. Understanding affective interactions between a consumer and virtual influencer is critical because it can set the foundation for how to build relationships with consumers via virtual influencers. Further, The advertising research suggests that an affectional relationship with an endorser enhances attitude toward the advertisement and attitude toward the brand (Knoll & Matthes, 2017). In addition to affectionate

interactions, consumers were also have cognitive interactions with the virtual influencers' posts.

Cognitive Parasocial Interactions

Cognitive interactions are user comments that indicate “attention allocation, comprehension and reconstruction, anticipatory observation, evaluations and construction of relations between persona and self” (Knoll & Matthes, 2017, p. 311). For example, 6% of the comments were consumers engaging in conversation with the virtual influencer, like “how is your day, Liam?,” “do you have a plan for the weekend,” and “you should have went with me.” Cognitive interactions are typically a result of available in-depth knowledge about the endorser. Thus, the more detailed information that is shared on the virtual influencers' profile, the greater the opportunity for cognitive interactions.

Cognitive interactions will aid in consumers ability to form strong social parasocial relationships with influencers through social media (Kim et al., 2015; Wilcox & Stephen, 2014). Such interactions were found in consumer comments like:

“well honestly in my opinion? Love has no boundaries! And I'm sure that person would notice you...I mean, I would! Also, you're real enough for someone to fall in love with you! And if they don't see that...well their loss. Cuz to me you're more human than anyone else I've ever seen/met!”

This comment shows consumers are engaging in an internalization process and thus constructing relations with the virtual influencer. This finding supports and extends

Stever and Lawson's (2013) research where fans were able to develop intimate relationships with celebrities through media exposure.

Behavioral Parasocial Interactions

Behavioral interactions refer to motor activity, physical activity, and verbal utterances (mimics and gestures) of behavior (Klimt et al., 2006). These interactions are displayed through online behaviors such as electronic word of mouth or eWOM. The action of tagging other users in a post on Instagram, is considered eWOM (Delafrooz et al., 2019). Prior research shows a significant positive relationship between brand attitude and eWOM (Chu & Sung, 2015) and that consumers are more likely to share their positive attitude than a negative attitude (Maheri & Hosserini, 2015). This finding was supported in this study because several users included heart emojis in their eWOM post. Consumers were actively sharing the virtual influencers content on Instagram, spreading awareness about the brands advertised. Thus, achieving one of the core objective of endorsements, generating brand awareness (O'Reilly & Bradley, 2008)

Another example of how behavioral interactions were exemplified in the comments was an indication of consumers purchase intention or verbal utterances. For example, followers posted, "I want KFC now because this photo made it just perfect," "okay, but where did you get that gown and eye cover?! Cute!!!!!!," and "where is this hoodie from." This category captured comments that specifically mentioned the virtual influencer's post as an advertisement. Also, users' reflections on virtual influencers' posts demonstrated behavioral interactions. For instance, one user posted "you turned into an ad-bots so quickly!." Comments like this may indicate that users are irritated by

the use of virtual influencers as endorsers. As noted previously, consumers are seeking out authenticity (Charlton & Cornwell, 2019) and such negative attitudes toward the advertisement can be a result of consumers frustration with lack of genuineness in advertisements (Moulard et al., 2015).

Foreign Language and Phishing

Since Instagram is a global platform and virtual influencers are able to reach a diverse group of followers, there were several user comments that were in a language different than English. Ten percent of total comments reviewed were in a foreign language. While this limited the interpretation of the comments, it also showed that a virtual influencers post (in English) is reaching different demographics. This study did not capture where the commenters were located to determine if they were in fact outside of the US, but these findings do imply a potential global audience. This is extremely valuable for international brands who want to take advantage of using a virtual influencer in their marketing mix. Social media platforms create the opportunity for a global message (Filo et al., 2015) and virtual influencers are able to potentially attract a global audience.

Instagram, like many other social media platforms, has robot accounts, which are created by hackers and used as an attempt to obtain personal information from users on the platform. For example, these phishing comments say “add me to get quick cash.” These phishing comments are particularly prevalent on Instagram user accounts that have a large following. Also, this category included users’ comments aimed at generating publicity for themselves. For example, one user said “stream my single The

way you make me feel by #jzidor.” This category accounted for 10% of total comments reviewed.

Identification and Internalization Processes

This analysis showed that users' parasocial interactions are facilitated by user identification or internalization (RQ2). The identification process was typically utilized when the interactions were affectionate, where the user identified with the virtual influencer through superficial mechanisms such as attractiveness or similarity (Kelman, 1961). The internalization process was typically utilized when the interactions were cognitive or behavioral, where the user evaluated the content of the message and its authenticity. However, there were some comments in the affective parasocial interaction category that users likely followed the internalization process (e.g., comments about their expertise). Further explanation is provided in the discussion below.

Discussion

In the advertising and endorsement literature consumers responses to advertisements are categorized into three prominent effects: cognitive, affective, and behavioral (Lavidge & Steiner, 1961). These outcome effects are achieved through two social influence processes: identification and internalization (Kelman, 1961). In the context of social media endorsements, these effects have been achieved through parasocial interactions between users and social media persona (Klimt et al., 2006; Yuksel & Labrecque, 2016). Such interactions have been shown to positively affect advertising outcomes, including attitude toward the advertisement and brand (Kapitan & Silvera, 2015) and purchase intention (Sokolova & Kefi, 2020).

The findings in study 1 showed that consumers are having parasocial interactions with virtual influencers, specifically affective, cognitive and behavioral interactions (RQ1). Finding that users have parasocial interactions and in some cases relationships with virtual influencers indicates a potential marketing opportunity for virtual influencers as endorsers. To date, there is little academic research explaining how virtual influencers are perceived by consumers and whether consumers will interact with them like humans. Prior research shows that parasocial interactions can be achieved in computer-mediated environments (Ballantine & Martin, 2005) and specifically on Instagram (Labrecque, 2014), but parasocial interactions with virtual influencers has not been contemplated. Thus, while research has likened human interactions with computers or robots to those between humans (Nass & Moon, 2000; Reeves & Nass, 1996), there is no connection in the literature between parasocial interactions between robot and human. This study fills that gap by exploring the possibility of parasocial interactions on Instagram between a human and robot. Specifically, this study found users are having parasocial interactions with virtual influencers, just as they would human influencers (RQ1) and users are utilizing both identification and internalization processes (RQ2) resulting in three main parasocial interactions: affective, cognitive and behavioral.

Affective responses accounted for the largest category of comments analyzed, where virtual influencers were inspiring users through certain emotions. User comments were a clear exchange of feelings and/or emotions that were induced from the virtual influencers' post. For example, some users were bonding over shared interests, such as clothing styles or movies. These comments indicated that users can relate and connect

emotionally to virtual influencers. Users were found to be communicating their feelings, attitudes, and perceptions toward the virtual influencers, just like they would with a human influencer. Such comments prove that affective parasocial interactions on Instagram are possible with virtual influencers.

The literature supports that affective responses are typically achieved through the identification process. Identification occurs when individuals adopt the attitude or behavior of another because the individual derives satisfaction from the belief that they are similar to the person (Friedman & Friedman, 1979). Thus, identification is related to likeableness and attractiveness. Research indicates that this is the process underlying persuasion of celebrity and sometimes peer endorsers (Friedman & Friedman, 1979). Since users have affective parasocial interactions with virtual influencers it is possible that identification is the process underlying persuasion in their endorsements. However, some affective responses (e.g. expertise) were likely facilitated through the internalization process. Internalization process occurs when individuals accept recommendations from endorsers because the endorsers attitude aligns with the individual's belief system (Kelman, 1961). This underlying process is particularly evident in user comments regarding the expertise of the virtual influencer. Overall, the findings in this study implied that users do not think virtual influencers can exhibit expertise. A finding also demonstrated in (Molin & Nordgren, 2019). This represents a potential major challenge for marketers because expertise has been found to be a critical measure of endorser effectiveness (Amelina & Zhu, 2016; Amos et al., 2008) and the

inability of virtual influencers to achieve expert status may limit virtual influencers marketability.

Another major challenge that emerged in the analysis was other negative affectionate responses. These responses counted for 10% of total comments analyzed and demonstrated that consumers may not be comfortable with virtual influencers. For instance, users questioned how the avatar was doing the activity in the photograph posted and some users even stated that the virtual influencers made them “feel strange.” Affective responses to virtual influencer posts often aid in the formation of attitude toward the advertisement and attitude toward the brand (Mitchell & Olson, 1981; Shimp, 1981) and negative affectionate responses can be a direct inhibitor of positive advertising outcomes. Although, overall there were significantly more positive affectionate responses than negative, this still implies that virtual influencers may not be the most appropriate endorser for certain target audiences. Similar to Friedman and Friedman’s (1979) discovery that different types of endorsers were more effective for certain products, this research indicates that virtual influencers may be more effective for certain products based on the different processes used to evaluate their posts.

In addition to having affective parasocial interactions, users were also engaging in cognitive parasocial interactions with virtual influencers as they would human influencers. Cognitive effects are enhanced when users have in-depth knowledge about the endorser. Instagram provides an ideal storytelling platform for virtual influencers to portray their storylines to users (Prosser, 2019). Virtual influencers storylines are built overtime and evolve to attract and retain followers' interest (Bradley, 2020). It is through

these story arcs that users obtain information about the virtual influencers and cognitive parasocial interactions can occur. At the crux of cognitive effects are users' interest and attention. The findings in this study indicate that virtual influencers can command human attention and interest. User comments concerning how they relate to the virtual influencer show cognitive parasocial interaction through comprehension. Other comments indicated cognitive parasocial interaction through construction of relations between the virtual influencer and users. For example, some users asked the virtual influencer to go to a restaurant or the movies with them. These comments were likely formed through the internalization processes where users engaged in a deep analysis evaluating the virtual influencers characteristics (e.g. honest, sincerity) (Friedman & Friedman, 1979).

Prior research has shown strong correlations between cognitive effects and positive advertising outcomes. Specifically, cognitive effects are likely a result of strong meaning transfer effects (Knoll & Matthes, 2017). Where consumers are actively thinking about the virtual influencer and the meanings embodied in the post, processing those meanings in terms of themselves, and then transferring those meanings to the endorsed product (e.g. Meaning Transfer Model; McCracken, 1989). Signaling that users' interactions with virtual influencers are social and natural (Reeves & Nass, 2004) and virtual influencers are capable of being defined through meanings. This finding is significant because it indicates that companies are able to use virtual influencers to personify their brand and form bonds with consumers. Moreover, this study supports the possibility of brands creating their own virtual influencers to endorse products. A main

benefit to using virtual influencers over human influencers is the control of content and virtual influencer behavior. Brands are able to build their perfect ambassador. This study identified that consumers are willing to accept the manufactured meanings of virtual influencers and transfer them to the endorsed products. Creating immense opportunity for marketers to interact and engage with consumers to further their message.

Lastly, this study found that consumers have behavioral parasocial interactions with virtual influencers. Behavioral interactions are those that mimic real gestures or verbal utterances explaining users' intentions (Klimt et al., 2006). Behavioral effects were illustrated in this study through eWom and purchase intention. eWom is a behavior that is specific to an online environment and represents a means to achieve a major advertising objective, generating brand awareness. It is also another way of interacting with the virtual influencer, sharing their content with others. Discovering that users are engaging with eWOM on virtual influencers' posts is an important implication for marketers because it shows that consumers are interested in the virtual influencers content and actively sharing it with others. Moreover, for a majority of the eWOM comments, users also included a heart emoji, indicating a positive opinion of the post. eWOM comments represent users going through an internalization process because they are evaluating the content and deciding to share it. In other words, eWOM exhibits users accepting the virtual influencers message and adopting it for themselves (Kelman, 1961). Additionally, some user comments showed a desire to purchase the product in the virtual influencers post. These interactions were also likely a result of the user following the internalization process when evaluating the virtual influencer post because it indicates

the user adopting the behavior of the virtual influencer (e.g. they want to dress like the virtual influencer). Users experiencing behavioral parasocial interactions with virtual influencers further supports the potential for virtual influencers as endorsers. Specifically, this effect demonstrates that virtual influencers' posts may influence consumers' attitude towards the advertisement and brand and purchase intention, as evidenced by users' eWOM comments and desire to buy products in the virtual influencers post.

The findings in Study 1 represented a first step toward understanding virtual influencers as endorsers. Specifically, the findings indicated that consumers processes and outcome effects for evaluating virtual influencer endorsements are similar to those used to evaluate human endorsements. This shows that virtual influencer endorser effectiveness may be measured similarly to traditional endorser effectiveness. Several studies have found the outcome effects (cognitive, affective and behavioral) to be directly related to advertising outcomes, attitude toward the advertisement, attitude toward the brand (Aaker et al., 1986; Homer, 1990; MacKenzie & Lutz, 1989) and purchase intention (Fazio et al., 1978; Zielske, 1959). Thus, the findings in this study were furthered in Study 2 by quantitatively measuring whether users' parasocial interactions with virtual influencers translate into desired advertising outcomes (attitude toward the advertisement and brand and purchase intention).

CHAPTER V

STUDY 2 LITERATURE REVIEW

The literature discussed in Study 1 provided an overview of advertising effectiveness and the use of endorsers to achieve advertising outcomes. For several decades, marketers have used endorsers to enhance advertising persuasiveness. To aid in this practice, several scholars have examined whether and under what contexts certain endorsers are appropriate (Agrawal & Kamakura, 1995; Atkin & Block, 1983; Freiden, 1984; Friedman & Friedman, 1979; Kamins, 1989; Kamins & Gupta, 1994; Ohanian, 1991; & Till & Shimp, 1998, 2000). Study 1, guided by extant literature, represents a first step toward creating an evaluative framework for evaluating virtual influencers persuasiveness as endorsers. The findings in Study 1 suggest that consumers go through similar processes and have similar responses to virtual influencer endorsers as they do human endorsers. Specifically, the study found that consumers are using personal characteristics of the virtual influencer to form their attitude and opinion about the advertisement, which are resulting in affective, cognitive and behavioral responses (Erdogan, 1999; Grave, 2017; Kaikati, 2015; Kamins, 1990; McCracken, 1989; Ohanian, 1990). It is a common understanding in the marketing literature that personal characteristics influence the perception and effectiveness of endorsers and such process is illustrated by MTM and Source Credibility Model. The MTM and Source Credibility Model have been used to describe the effects of celebrity endorsement in advertising. The two frameworks work in complement of each other to help explain different phenomena in the endorsement process. The Source Credibility Model, emphasizes the

importance of the endorser's characteristics on their overall persuasiveness (Hovland et al., 1953). Specifically, focusing on an endorser's attractiveness, trustworthiness, and expertise (Ohanian, 1991). The MTM substantiates how consumers transfer the characteristics or "meanings" of the endorser to the endorsed product (McCracken, 1989).

Theoretical Frameworks

Meaning Transfer Model

The literature indicates that endorsers add value to a company, brand, or product through the progression of meaning transfer (McCracken, 1989). The main purpose of the MTM is to explain the cognitive endorsement process. As McCracken (1989) stated:

In the best of all possible worlds, the marketing/advertising firm first would determine the symbolic properties sought for the product...It would then consult a roster of celebrities and the meanings they made available, and taking into account budget and availability constraints, would choose the celebrity who best represents the appropriate symbolic properties. (p. 316)

MTM is a three-step process through which consumers transfer meanings they attributed to celebrities to a consumer good (McCracken, 1989). "According to this model, there is a conventional path for the movement of cultural meaning in consumer societies" (McCracken, 1989, p. 313). Meanings start as something resident in the physical and social world constituted by categories and principles of the prevailing culture (McCracken, 1989). This theory posits that the effectiveness of an endorser depends on the meanings and associations they bring with them to the endorsement from

other areas of their life (Halonen-Knight & Hurmerinta, 2010). For virtual influencers, these meanings and associations can be constructed by brand managers to achieve a specific image within the minds of consumers. Particularly, trustworthiness, expertise, and attractiveness have all been empirically tested and proven to be strong influencers in predicting endorser effectiveness (Amos et al., 2008; Erdogan, 1999; Fink et al., 2004). The results of Study 1 indicated that consumers are considering virtual influencers attractiveness, expertise, and trustworthiness when processing the endorsement. Almost 20% of the comments analyzed were users discussing virtual influencers physical appearance. Additionally, multiple comments questioned the authenticity of the virtual influencers' endorsement, citing their nonhuman attributes and lack of ability to try the products endorsed. This inquisition of virtual influencers authenticity may also indicate a lack of trustworthiness. This study will explore these findings further and specifically evaluate whether consumers perceive virtual influencers as experts.

In the first stage of the MTM, the advertiser must identify the meanings intended for the product and then find the endorser who fits the identified meanings (McCracken, 1989). Using virtual influencers, brands can create storylines embedded with the meanings they want to be attributed to the endorsed brand or product. The purpose of the advertisement is to communicate the culturally constructed meanings of products to consumers via an endorser (Erdogan, 1999). This can be achieved by virtual influencers weaving branded posts in with their daily content, so that users are exposed to the meaning's brands are creating for the virtual influencers on their social media profiles in addition to the endorsed post. During the second stage, marketers must make sure that

the advertisement evokes the desired meanings of the endorser (because they will have more than one meaning attributed to them) and that the endorser and product are presented in such a manner that the similarity between them is obvious (McCracken, 1989). This is the part of the process where brands will connect the virtual influencers storylines and manufactured meanings to the endorsed brand or product. The association should be natural and easy for consumers to make the transfer of meanings from the virtual influencer to the brand. This can be done through careful and strategic storytelling. Finally, stage three, the most complex stage, requires consumers to “claim, exchange, care for, and use the consumer good to appropriate its meanings” (McCracken, 1989, p. 317). Consumers are constantly taking possession of cultural meanings and principles in consumer goods to help define their self-image (McCracken, 1989). In particular, “consumer goods charged with cultural significance, serve as dramatic props and meaning sources. They provide ideas of gender, class, age, or lifestyle to individuals” (Ergodan, 1999, p. 307). When it comes to defining virtual influencers with meanings, Study 1 showed that there is little difference between virtual influencers and human influencers. However, virtual influencers can be created to portray an ideal image. Meaning, brands are able to personify any meanings they want to be attributed to their products. Aside from the myriad of meanings that can be created for a virtual influencer, there should be a focus on whether credibility dimensions are predictors for virtual influencer endorser effectiveness because these characteristics and meanings have been repeatedly found to predict human endorser effectiveness (Hovland et al., 1953; Ohanian, 1990).

Source Credibility Model

Source credibility was proposed by Hovland and colleagues in 1953. Source credibility has been defined as “a term commonly used to imply a communicator’s positive characteristics that affect the receiver’s acceptance of a message” (Fink, et al., 2004, pp. 3). Despite Hovland and colleagues (1953) article being attributed as the origin of source credibility, Hovland and Weiss (1951) conducted the initial studies for source credibility as a theoretical construct (Epega, 2008) and Hovland and colleagues (1953) further refined source credibility into two main dimensions; trustworthiness and expertise. Since the publication of this seminal work, scholars have conducted research exploring and extending different dimensions of source credibility (Brown, 1988; Dholakia, 1987; Epega, 2008; Friedman et al., 1978). The most notable addition to source credibility research was made by Ohanian (1990) who synthesized previous literature on source effects and added an additional dimension, attractiveness to Hovland et al (1953) source credibility dimensions.

Source Credibility Model states that individuals or an audience are more likely to be persuaded when a source is perceived or presented as credible (Umeogu, 2012). The model assumes that a credible source, one with high levels of either attractiveness, expertise, or trustworthiness (or a combination of these dimensions) creates the desired impact of credibility on the audience (Umeogu, 2012). Research supports this assumption as the credibility dimensions have been proven effective predictors of endorser effectiveness (Ergodan, 1999; La Ferle & Choi, 2005; Simmers et al., 2009).

Source Credibility Model, is a well-established theory used in marketing and communication research to explain message efficacy (Wang & Scheinbaum, 2018). Early research examines the importance of source credibility in predicting the audience's response to the information presented (Ayeh, 2015). Specifically, the Source Credibility Model has been shown to also influence consumers' cognitive and affective responses to content (Ayeh, 2015; Li, 2013). Study 1 demonstrated that consumers are having cognitive and affective responses to virtual influencers posts and thus the source credibility dimensions may be valuable measures or predictors for virtual influencers endorser effectiveness.

Measuring Endorser Effectiveness

The theoretical frameworks outlined above illustrate the process through which consumers evaluate endorsements. Specifically, MTM explains the mechanism through which consumers extract meanings attributed to endorsers from an advertisement and transfer them to the endorsed product or brand. Source Credibility Model provides three characteristics (attractiveness, trustworthiness, and expertise) that have been found to be influential factors when evaluating endorser effectiveness (Epega, 2008; Fink et al., 2004; Ohanian, 1990). In measuring endorser effective scholars have predominantly utilized attitude toward the advertisement (Burton & Liechtenstein, 1988), attitude toward the brand (Percy & Rossiter, 1992), and purchase intention (Daneshvary & Schwerm 2000; Kamins et al., 1989). Additionally, these variables were also identified in Study 1 (attitude toward the advertisement and purchase intention) as potential outcomes from consumers viewing virtual influencers' posts. Thus, to further analyze

the findings in Study 1 and to continue building the evaluative framework for virtual influencers, attitude toward the advertisement, attitude toward the brand, and purchase intention were treated as dependent variables in assessing virtual influencer persuasiveness as endorsers.

Attitude Toward the Advertisement

Shimp (1981) conceptualized attitude toward the advertisement as having two distinct dimensions: a cognitive dimension and an emotional dimension. For the cognitive dimension, consumers form their attitude toward the advertisement by consciously processing executional elements (Shimp, 1981). For instance, a consumer may like an advertisement because the endorser employs a humorous execution. For the emotional dimension, consumers form their attitude toward the advertisement by an emotional response, such as a feeling of nostalgia or sadness, without consciously processing executional elements (Shimp, 1981). Advertising practitioners have argued the importance of engendering favorable consumer attitudes towards the advertisement (Shimp, 1981). “Advertisers believe that a ‘likeable’ ad can create favorable consumer impressions that may result in a long-term competitive advantage for the advertised brand” (Burton & Lichtenstein, 1988, p. 3). Further, achieving a positive attitude toward the advertisement is desirable because it demands minimal cognitive processing by consumers (Zajonc, 1980). Additionally, Study 1 showed that users may have a negative attitude toward the virtual influencer advertisement and thus further analysis was needed. Although there were only a few negative comments, in regards to consumers attitude toward the advertisement, further exploration is needed to gain additional insight

into whether consumers are irritated or frustrated with virtual influencers as endorsers. Moreover, since consumers may be irritated by the use of virtual influencers in advertisements, a negative attitude toward the brand may also result. Therefore, this study sought to evaluate whether virtual influencer endorsements impacted consumers attitude toward the brand.

Attitude Toward the Brand

Mitchell and Olson (1998) defined attitude toward the brand as an “individual’s internal evaluation of the brand” (p. 318). Spears and Singh (2004) further conceptualized the attitude toward the brand as “a relatively enduring, unidimensional summary evaluation of the brand that presumably energizes behavior” (p. 55). More specifically, a consumer’s attitude toward the brand, refers to the consumers’ tendency to form an attitude about whether the brand is positive or not (Handriana & Wisandiko, 2017). Brand attitude is a critical construct to understand effective advertising (Percy & Rossiter, 1992) because a positive brand attitude often forms the basis for consumer behavior (Keller, 1993). As a result, measuring attitude toward the brand serves as a strong predictor of consumer behavior (Spears & Singh, 2004).

In the context of this analysis, attitude toward the brand is particularly relevant because virtual influencers represent a brand utilizing new technology. Depending on the consumer, using advanced technology may enhance their attitude toward the brand because they appreciate the novelty of the endorsement. Conversely, consumers may rebuff the use of virtual influencers and in turn have a negative attitude toward the brand. For example, one user commented in Study 1 that they were sad to see virtual

influencers take the place of human endorsers. This response may translate into a negative attitude toward a brand who uses virtual influencers. Together, attitude toward the advertisement and attitude toward the brand are measured to predict consumer purchase intention.

Purchase Intention

Purchase intention is routinely found as a variable in endorser effectiveness studies (Daneshvary & Schwer, 2000; Kale & Homer, 1985; Kamins, Brand, Hoeke, & Moe, 1989; McCormick, 2016; Ohanian, 1991; Till & Busler, 2000). Purchase intention is referred to as the subjective judgment by consumers that is reflected after general evaluation of the product or services (Balakrishnan, Dahnil, & Yi, 2014). In other words, purchase intention is the degree to which a consumer is likely to purchase a product. Typically, the main goal of a marketing campaign is to encourage consumers to use a product or service which will ultimately result in their purchase of the product or service. As noted in the MTM, advertisements are used as a mechanism to transfer meanings from the endorser to the endorsed product to be accepted by the consumers (McCracken, 1989). The results of Study 1 showed that virtual influencer endorsements likely result in purchase intention. Thus, this study sought to expand on and quantify those findings.

Prior research and findings of Study 1 support the use of attitude toward the advertisement, attitude toward the brand, and purchase intention as outcome variables for evaluating virtual influencer effectiveness. Particularly, it is well established in the literature that consumers' overall attitude towards the advertisement and brand impact the effectiveness of advertising and the role of endorsers (Greyser, 1972; Lutz, 1985;

Mackenzie et al., 1986; Shimp, 1981). Thus, based on extant literature and the need to quantify the findings in Study 1 the following hypothesis was developed to measure virtual influencer endorser effectiveness:

H1: Compared to an advertisement without a virtual influencer, an advertisement with a virtual influencer will lead to higher attitude toward the advertisement and brand and purchase intention.

The Role of Credibility in Endorsement Effectiveness

To achieve positive attitude toward the advertisement and brand and purchase intention, studies have focused on the influence of personal attributes of the endorser to enhance his or her persuasiveness (Hovland et al., 1966; Kamins & Gupta, 1994; Kapitan & Silvera, 2016; Ohanian, 1990). According to Hovland and colleagues (1966), a receiver's perception of the credibility of the source of information greatly influences the advertisements effectiveness. Thus, studies have used endorsers perceived attractiveness, trustworthiness, and expertise to measure their effectiveness (Brison et al., 2016; Munnukka et al., 2015; Lou & Yuan, 2019; Schmidt et al., 2019; Kapitan & Silvera, 2016). Trustworthiness, attractiveness, and expertise have been noted as the most influential sources to effect purchase intention, brand attitude and consumer's attitude toward an advertisement (Wang & Schienbaum, 2018). For example, Brison and colleagues (2016) explored the effectiveness of an endorser with both familiar and unfamiliar brands by examining the endorsers credibility. The study found that an athlete's endorsement of an unfamiliar product had positive effects. Specifically, the study showed that if a consumer had positive perceptions of the athlete's attractiveness,

trustworthiness, and expertise, these attitudes were transferred from the athlete to the endorsed brand (Brison et al., 2016). Thus, a message's effectiveness has been found to be greater when the credibility of the endorser is higher (Sternthal, et. al., 1978). These findings are also supported with human influencers (Schouten et al., 2019). Schouten and colleagues (2019) found that influencers were perceived as more similar and thus more trustworthy than celebrity endorsers. Kapitan and Silvera (2015) also noted the effect of the credibility dimensions on consumers processing mechanism (identification or internalization). Specifically, Kapitan and Silvera (2015) noted the effects of trustworthiness and expertise on enabling the internalization process and the effects of attractiveness facilitating the identification process (Kapitan & Silver, 2015).

Extant literature suggests and Study 1 found that consumers will interact with virtual influencers as they would human influencers on social media. Specifically, the findings in Study 1 also showed themes that consumers are using credibility dimensions to evaluate virtual influencers. Thus, as the literature suggests, Study 2 utilized the credibility dimensions as a means to predict virtual influencer effectiveness.

Trustworthiness

Trustworthiness refers to the level of confidence the audience has in the endorser when they deliver the message (Amelina & Zhu, 2016). Confidence is a key antecedent to trust. It is measured by the audiences' belief that the source is providing unbiased information in a sincere manner (Hovland & Weiss, 1951; La Ferle & Choi, 2005;). A quantitative synthesis conducted by Amos and colleagues (2015) found that trustworthiness was the most influential source effect on attitude toward the

advertisement and brand and purchase intention. Further, Koo and colleagues (2012) found that trustworthiness is an essential construct in persuasion and attitude change, An endorser's openness, comprehensibility, and intimacy help shape their trustworthiness (Chung & Cho, 2017). These desired characteristics are likely found in virtual influencers because virtual influencers are constantly available to take care of consumer's social and psychological needs (Molin & Nordgren, 2019), specifically with the advancements in machine learning and virtual influencers ability to respond to users with personal messages. However, Study 1 indicated that some consumers may not trust virtual influencers because they are a robot and being controlled by someone or some entity. Similarly, this issue may also be seen in the expertise dimension.

Expertise

The expertise dimension captures the extent a person possesses the knowledge, skills, or experience to provide accurate information on a given topic (La Ferle & Choi, 2005; Hovland & Weiss, 1951). The perception of expertise is enhanced when an expertise cue is provided to the audience (Amelina & Zhu, 2016). For example, using a soccer star to endorse soccer cleats. A meta-analysis conducted by Amos and colleagues (2008) showed that expertise was an essential factor in enhancing the persuasiveness of endorsers. Several studies have found that endorsers with high perceived expertise can raise attitude toward the advertisement and brand and purchase intention (Amos et al., 2008; Ergodan, 1999).

Extending the findings from Study 1, which indicated that virtual influencers may not be capable of being perceived as experts, Study 2 sought to measure consumers

perception of a virtual influencers' expertise. When evaluating virtual influencer endorser effectiveness, it is important to determine whether expertise and trustworthiness are potential measures because brand managers who want to use virtual influencers in their marketing mix will need to know what characteristics should be manufactured for the virtual influencer. Additionally, understanding whether consumers use expertise and trustworthiness to assess virtual influencers is important because it indicates which processing mechanisms they are using to evaluate the endorsement (e.g. internalization for expertise and trustworthiness and identification for attractiveness).

Attractiveness

Attractiveness refers to whether the audience perceives the source as physically attractive, likeable, or familiar (La Ferle & Choi, 2005; Ohanian, 1991). Endorser attractiveness serves as an important cue for an audiences' initial judgment of an endorser (Amelina & Shu, 2016). Research has found support that attractiveness results in positive image and evaluation of the products endorsed (Koo et al., 2012). Specifically, consumers perceived attractiveness of the endorser may trigger identification processing of the endorsement. For example, Schouten et al. (2019) found that individuals felt more similar and related to influencers more than the celebrities. Similarity is understood as the perceived closeness of the source to the recipient (e.g. similarity in terms of demographic or ideological aspects) (Munnukka et al., 2016). Additionally, research has shown that attractive endorsers facilitate attitude change (Amelina & Shu, 2016; Kahle & Homer, 1985; Ohanian, 1991). Since virtual influencers are computer generated, their appearance can be specifically chosen. For example,

Shudu Gram is a computer-generated influencer, who works as an Instagram model with flawless dark skin and a perfectly symmetrical face (Kulp, 2018).

It was a common theme in Study 1 for users to compliment the virtual influencers on their physical appearance. In fact, the majority of these comments (16% out of 19%) were positive perceptions of the virtual influencers' attractiveness. This could be a major advantage for marketers looking to use virtual influencers, if attractiveness is found to influence endorser effectiveness, because brands are in complete control of the avatar's appearance. Based on the literature and findings in Study 1 measuring virtual influencers credibility is a necessary step toward creating an evaluative framework for understanding virtual influencers effectiveness as endorsers. Guided by prior literature the following hypothesis was developed:

H2: Consumer's perception of a virtual influencers' credibility will affect consumer's attitude toward the advertisement and brand and purchase intention.

The Role of Brand-Endorser fit on Virtual Influencer Effectiveness

Assael (1984) suggested that celebrities are effective endorsers as a result of their aspirational reference group association. Reference groups provide points of comparison that allow consumers to evaluate attitudes and behaviors (Kamins, 1990). In other words, consumers may aspire to be like the endorser and identify with the reference group and therefore purchase the endorsed products. Operating under the assumption that "what is beautiful is good" advertisers often selected celebrities on the basis of their physical attributes, intending to capitalize on both the celebrities' social status and physical appeal (Kamins, 1990). While this technique has been found to influence attitude change

towards products and advertisements, research has also shown that physical attractiveness does not always enhance these measures (Kamins, 1990). Therefore, as a contingency approach scholars have suggested the need for the endorser to “match-up” with the characteristics of the product being endorsed (Kahle & Homer, 1985).

Brand-endorser fit has been examined extensively as a means to predict endorser effectiveness (Kahle & Homer, 1985; Kamins, 1990; Wright, 2016). The match-up hypothesis suggests that an endorsement is more effective when there is a fit between the endorser and the product they are endorsing (Fink et al., 2004; Kahle & Homer, 1985; Kamins, 1990). The term fit has been used interchangeably with match-up hypothesis in the literature to capture the relatedness, similarity, relevance or congruence between an endorser and the brand, product, event or service being endorsed (Kahle & Homer; Till & Busler, 1998, 2000). The fit between an endorser and endorsed brand can be accomplished by aligning endorser characteristics with the brand characteristics. Associative learning theory has been utilized to explain the effects of the match-up hypothesis (Fink et al., 2004; Till & Busler, 2000).

Associative learning theory posits that links or associations between concepts can be created. Further patterns of concepts connected together form a linked configuration network of memory that will be utilized to process a message every time the concept is prompted (Till & Shimp, 1998). In terms of advertisements, the endorser brings meanings to the advertisement and consumers will connect those meanings to the brand (McCracken, 1989). The fit between the brand and the endorser will influence the strength of the association of the meanings between brand and endorser.

Several studies have found support for a positive effect of brand-endorser fit on brand evaluations (e.g. Choi & Rifon, 2012; Kamins & Gupta, 1994). A likely cause for this is because when consumers see a strong fit between an endorser and brand, they are likely to attribute an internal motivation behind the endorsement (Carlson et al., 2020). If there is low fit between the endorser and the product, this could trigger greater elaboration, which may ultimately result in skepticism regarding the endorsement (Carlson et al., 2020; Petty & Cacioppo, 1981). Thus, fit between the endorser and brand can be a valuable predictor for endorser effectiveness. For example, McCormick (2016) compared the effectiveness of an unfamiliar celebrity endorser versus a familiar celebrity endorser. The study found that when the participants viewed the image of the unfamiliar celebrity and the image of the product as fit, a positive attitude for both attitude toward the advertisement and brand was formed (McCormick, 2016). Further, Kim & Na (2007) compared the effectiveness of athlete versus non-athlete endorsers and found that participants showed more favorable attitudes when there was a fit between the endorser and the endorsed product regardless of athlete status. Thus, even endorsers who are unknown can still be effective endorsers, as long as there is a perceived fit between brand and endorser (Kim & Na, 2007; McCormick, 2016). Likewise, Kamins and Gupta (1994) found that the higher the degree of fit between the spokesperson and the product being endorsed, the greater the believability of the spokesperson, regardless of celebrity status. This means that virtual influencers may not have to obtain high popularity or followership to be effective endorsers, rather their image needs to align with the endorsed brand or products. In addition to meanings (e.g. age, social status, gender, etc.)

product-endorser fit can be achieved by using source credibility characteristics (Lee & Koo, 2015). Attractiveness (Kahle & Homer, 1985; Kamins, 1990; Till & Busler, 2000), expertise (Fink et al., 2012; Friedman & Friedman, 1979; Till & Busler 1998), and trustworthiness (Kamins & Gupta, 1994). For example, Kahle and Homer (1985) found that attractive endorsers were more effective in advertising products used to enhance an individuals' attractiveness than non-attractive endorsers. Till and Busler (2000) extended the match-up hypothesis concept beyond physical attractiveness to also consider the expertise of the celebrity. Their research found that celebrity expertise is effective in creating a positive brand attitude when the celebrity is paired with a product consistent with the endorser's expertise (e.g. golfer endorsing golf clubs) (Till & Busler, 2000). Thus, the credibility characteristics associated with endorsers may also influence endorser-product fit.

While there are a few studies that found a slight mismatch between brand and endorser to be more effective (Thorson & Lee, 2008), the common finding is that brand-endorser fit is a predictor of endorser effectiveness (Dees, et al., 2010; Fink et al., 2004; Gwinner & Eaton, 1999; Kahle & Homer, 1984; Kamins, 1990; Kamins & Gupta, 1994; Till & Busler, 2000). Further, since the findings in Study 1 showed that users are having parasocial interactions with virtual influencers, it is likely that brand-endorser fit will also enhance virtual influencers effectiveness as an endorser. Based on the literature and findings in Study 1 the following hypothesis has been developed:

H3: Influencer-product fit will have a positive effect on attitude toward the advertisement and brand and purchase intention.

CHAPTER VI

STUDY 2 METHODOLOGY

Design and Manipulation

The second study was utilized to further the findings in Study 1 and quantify virtual influencer endorser effectiveness. Drawing from the findings in Study 1, this research sought to measure (1) virtual influencers' effectiveness as an endorser, (2) virtual influencer's perceived credibility, and (3) examine the impact of virtual influencer-brand fit on endorser effectiveness. Prior to addressing the hypotheses in the main study, a pretest was administered. A pretest was done to reduce and eliminate potential confounding variables, including participant age, whether participants were a soccer fan, or played the video game FIFA, or followed an influencer on social media and control for athlete familiarity and brand familiarity. Additionally, the pretest evaluated whether the number of followers an influencer had on their social media profile impacted participants attitudes or purchase intention. Lastly, the pretest served as a manipulation check for brand-endorser fit. The findings from the pretest were then used to structure the final questionnaire for the main study.

In the main study, to examine whether the presence of a virtual influencer in an advertisement or endorser-brand fit impacted participants attitudes and purchase intention a repeated measures MANOVA was conducted (H1; H3). The within-subjects design was to show whether participants' attitudes or behavioral intentions changed after viewing the advertisement with the virtual influencer. To evaluate the effects of the credibility dimensions on virtual influencers, multilinear regressions were conducted

(H2). A total of three multilinear regressions were conducted, one for each dependent variable (attitude toward the advertisement, attitude toward the brand, and purchase intention). This analysis illuminated on the relationship between the credibility dimensions and virtual influencers' effectiveness as endorsers, specifically, whether the credibility dimensions were predictors of virtual influencer endorser effectiveness.

Selection of Endorser and Brand

Study 1 evaluated current virtual influencers' Instagram pages and found that virtual influencers could have parasocial interactions with humans. The aim of Study 2 is to quantify these findings and directly evaluate whether virtual influencers are persuasive endorsers and whether certain contexts (brand-fit) or meanings (attractiveness, trustworthiness, and expertise) enhance their persuasiveness. Study 1 showed the potential for underlying issues with virtual influencer expertise and trustworthiness; to further analyze this potential challenge the researcher selected a current virtual influencer that has an established storyline that could create the appearance of expertise. Thus, for this study, Alex Hunter, a virtual character in *FIFA 19: The Journey* video game, was selected. The use of a current athlete avatar provides a level of realism and practicality to the study as well as helps evaluate whether virtual influencers are capable of being trusted or considered experts. Moreover, Alex is currently used as an endorser by multiple major brands, Adidas and Coca-Cola (Carp, 2017; Pellatt, 2016).

Since Alex Hunter has existing endorsement deals with Coca-Cola and Adidas and both brands are in the top 6 most popular brands in sport sponsorship (finsmes.com,

2019), they were used in the study. Previous studies have utilized known brands to evaluate endorsement effects (Schouten et al., 2019). Additionally, Fly Emirates was also employed in this study because it is a prominent sponsor of La Liga and the Premier League. Both of these leagues are included in *FIFA 19* and most player's jerseys in the game have a patch with the Fly Emirates logo. Since Fly Emirates is a top sponsor within the soccer community and its brand has visibility in the video game, it was analyzed as a brand in this study.

Pre-test

Stimulus Advertisements

A total of six advertisements were created for the experiment. Each brand had an advertisement with and without Alex Hunter. To reduce potential confounding variables, the researcher purposefully controlled the background, logo location, logo size, and advertisement size to be as consistent as possible between the advertisements. For example, all advertisements had logos of the same size and color in the bottom left corner of the advertisement and all products were the same size and located in the bottom right corner. Additionally, the background of the advertisement, a soccer stadium, was the same for all of the stimuli. Lastly, the image of Alex Hunter (size, location, facial expression, body language, etc.) were identical among the advertisements. By limiting the differences in the advertisements to only be brand logo and product and the presence of Alex Hunter, the study was able to evaluate the effects of the virtual influencer without risk of these potential confounding variables (See Figures 1-6).

In addition to the advertisements, two association sets were utilized. The idea of an association set was first conceptualized in Till and Shimp (1998) to help control for consumers' perceptions of the endorser and product. An association set represents the connections individuals make with the endorser (Till & Shimp, 1998). Many studies have utilized an association set to provide the consumers background context of the endorser (Baker et al., 2017; Till & Shimp, 1998). An association set is intended to provide additional facts about the endorser to help eliminate any meanings that may already be known about the endorser (Till & Shimp, 1998). Additionally, an association set may serve as a way for a consumer to learn about an unknown endorser. The overall purpose is to ring the target node or activation link into working memory so that the associations made with the endorser can be transferred to the product (Till & Shimp, 1998). These association sets can also be utilized to help establish expertise or trustworthiness with an endorser. For example, Till and Busler (2000) created an association set for a fictitious endorser that portrayed the endorser as a legitimate spokesperson and established an overall positive impression. An association set was used in this study to provide participants with biographical information about Alex Hunter. Additionally, the associate set served as a cue for expertise, outlining Alex Hunter's athletic accomplishments. The background information provided on Alex Hunter was adapted from *FIFA 19-The Journey: Champions* website (ea.com, 2019).

In addition to presenting background information, the association set also provided a number of followers. This information was included to evaluate whether the number of followers influenced participants' attitudes and behavioral intentions. Similar

to the different types of endorsers in endorsement literature (expert, peer and celebrity), influencers have varying tiers based on the number of followers; (1) mega influencer has over 1M followers; (2) macro influencer has between 1M to 500,000 followers; (3) mid-tier influencer has between 500,000 to 50,000 followers; (4) micro influencer has between 50,000 to 10,000 followers, and nano has between 10,000 and 1,000 followers (mediakix.com, 2020). The number of followers, which reflects network size, is frequently used by marketing professionals to monetize influencers reach and predict the potential impact of a post (De Veirman, et al., 2019). A high number of followers may cue consumers to think the influencer is popular with others and thus may be perceived as more attractive and/or trustworthy (De Veirman, et al., 2019). However, research has shown mixed findings on the number of followers as a predictor of potential influence (De Veirman et al., 2019; Feng, 2016; Hwang, 2015; Romero, et al., 2011). Also, the findings in Study 1 indicated potential challenges with consumers finding virtual influencers trustworthy. Further, exploration is needed to examine whether the number of followers can facilitate perceived trustworthiness or potentially expertise. In total there were two different association sets to measure the different tiers of influencers. The two different association sets were::

Alex Hunter is a soccer player. He spent half a season in Major League Soccer, and moved to Europe to play for Real Madrid. He is an influencer with 5,000 followers.

Alex Hunter is a soccer player. He spent half a season in Major League Soccer, and moved to Europe to play for Real Madrid. He is an influencer with 100,000 followers.

Each association set was paired with the three advertisements featuring Alex Hunter for a total of six. The number of followers for each association set represents the mid-point of the number followers for the nano and mid-tier respectively. Nano and mid-tier levels were used because research suggests that these influencer levels are the most prevalent in influencer marketing.

Instrumentation

The questionnaire was constructed based on the findings in Study 1 that consumers are interacting and have similar responses to virtual influencer endorsements as they would human endorsements. Further, the analysis in Study 1 showed that users are evaluating virtual influencers' attractiveness and expertise when forming their attitudes and opinions. Additionally, constructs traditionally used in evaluating endorser effectiveness emerged as sub-themes in Study 1 (attitude toward the advertisement, purchase intention, and credibility dimensions). Therefore, such constructs (attitude toward the advertisement, attitude toward the brand, purchase intention, and credibility) were incorporated into the questionnaire. Attitude toward the brand was added as a construct to try and capture whether consumer's attitude toward a brand was impacted with the use of a virtual influencer. This measure was important to include because attitude toward the brand has been shown to predict purchase intention (Till & Busler, 2000).

Additionally, the questionnaire also measured participants' familiarity with the brands (Coca-Cola, Adidas, and Fly Emirates) and Alex Hunter. Brand familiarity of Coca-Cola, Adidas, and Fly Emirates were evaluated to determine whether participants' familiarity with the brand would influence their attitudes and behaviors. In theory, individuals who are less familiar with brands will have a larger range of potential attitudes and behavioral intentions than individuals who are familiar with brands (Carrillat et al., 2005). Thus, brand familiarity was evaluated in the pretest to minimize its impact on the measured outcomes, a similar method was used by Lohengrin and Hill (2014). Likewise, an individual's level of familiarity with Alex Hunter may result in participants using their prior associations with Alex Hunter to make an evaluation on his endorsement, rather than the endorsement itself. To reduce this effect, participants' familiarity with Alex Hunter was measured. Lastly, participants were asked about the fit between Alex Hunter and each brand. This was done to ensure that there was a significant difference between brands in terms of good-fit and poor-fit, so that the results would accurately reflect whether brand-endorser fit impacted participants' attitudes and purchase intentions.

Measures

This experiment asked participants to respond to various measures including: attitude toward the advertisement, attitude toward the brand, purchase intention, perceived trustworthiness, perceived attractiveness, and perceived expertise. Athlete and brand familiarity and brand-endorser fit were also measured. All scales adopted were deemed reliable in prior research: attractiveness, trustworthiness and expertise (Ohanian,

1990), attitude toward the advertisement (Mitchell & Olson, 1981), attitude toward the brand (Spears & Sing, 2004) and purchase intention (Till & Busler, 2000), brand and athlete familiarity (Kent & Allen, 1994), and brand-endorser fit (Till & Busler, 2000). Items of all scales are reported in Appendix 1.

Sample

A pretest was conducted on Amazon's Mechanical Turk (M-Turk), an online labor market for requesters to post jobs and workers can select which jobs they do for payment (Paolacci & Chandler, 2014 (N = 120). Previous studies have found obtaining participants from M-turk to be reliable (Pickett & Brison, 2019). Based on the length of the survey, about 20 minutes, workers were paid \$1.00 for their participation and completion of the questionnaire. Of the participants, 62% were male, 37% were female and 1% rather not say. The majority of the participants identified as Caucasian (59%), joined by Asian (14%), African American (10%), Hispanic (9 %), American Indian/Alaska Native (3%), Multi-ethnic (3%), and Native Hawaiian/Other Pacific Islander (3%). Further, 62% of participants were soccer fans, 51% followed an influencer on social media, and 61% played the video game *FIFA*.

Procedures

Prior to starting the survey, participants were given a letter informing them of the study's purpose, benefits, risks, contact information for the investigators and a consent form. Participant consent was necessary for participants to continue with the survey. After reading and agreeing to the consent form, participants were asked about their demographics, social media consumption habits and whether they were a soccer fan,

played *FIFA*, or followed an influencer on social media. Next, participants were randomly assigned to one of six groups. The groups were; (1) Adidas advertisement with no virtual influencer and Adidas advertisement featuring Alex Hunter with 5,000 followers (2) Adidas advertisement with no virtual influencer and Adidas advertisement featuring Alex Hunter with 100,000 followers (3) Coca Cola advertisement with no virtual influencer and Coca Cola advertisement featuring Alex Hunter with 5,000 followers; (4) Coca Cola advertisement with no virtual influencer and Coca Cola advertisement featuring Alex Hunter with 100,000 followers; (5) Fly Emirates advertisement with no virtual influencer and Fly Emirates advertisement featuring Alex Hunter with 5,000 followers; and (6) Fly Emirates advertisement with no virtual influencer and Fly Emirates advertisement featuring Alex Hunter with 100,000 followers. To account for nuisance variables a counterbalancing procedure was utilized where half of the participants saw advertisements without Alex Hunter first and the other half saw advertisements with Alex Hunter first. Prior to viewing an advertisement with Alex Hunter, participants were given one of following association sets:

Alex Hunter is a soccer player. He spent half a season in Major League Soccer, and moved back to Europe to play for Real Madrid. He has 5,000 followers.

Alex Hunter is a soccer player. He spent half a season in Major League Soccer, and moved back to Europe to play for Real Madrid. He has 100,000 followers.

Based on the group the participant was assigned, they were asked about their familiarity with either Adidas, Coca Cola, or Fly Emirates, as well as their familiarity with Alex Hunter

Immediately following the participants' exposure to the advertisements and responding to the outcome variables, participants were asked about the number of followers provided in the association set to ensure the manipulation was effective. Also, participants were asked to evaluate their perception of brand-endorser fit. This was done to determine which brands were perceived good or poor fit, so the impact of brand-endorser fit could be evaluated in the main study. Participants who finished the study were given a code to enter so researchers would know the individual completed the survey and be able to delete any response without a proper code. Approval for this research was granted by the Institutional Review Board (IRB) at Texas A&M University.

Main Study

Stimulus Advertisement

Based on the pretest only Adidas and Coca-Cola were used as brands. Therefore, a total of four advertisements were utilized for this study, two Adidas advertisements and two Coca-Cola advertisements. The researcher controlled for confounding variables in the advertisement by ensuring the background, location of brand logos, size of brand logos, position, facial expression and body language of Alex Hunter was the same across all advertisements. By limiting the differences in the advertisements to only be brand logos and products and the presence of Alex Hunter, the study was able to evaluate the effects of the virtual influencer without risk of these potential confounding variables.

In addition to the advertisements, two association sets were utilized. An association set was used in this study to provide participants with biographical

information about Alex Hunter. Additionally, the associate set served as a cue for expertise, outlining Alex Hunter's athletic accomplishments. This was done to further evaluate the findings in Study 1 that virtual influencers may lack expertise. The information provided in the association set was adapted from *FIFA 19-The Journey: Champions* website (ea.com, 2019). The association set read: "Alex Hunter is a soccer player. He spent half a season in Major League Soccer, and moved to Europe to play for Real Madrid." The association set was paired with the two advertisements featuring Alex Hunter.

Instrumentation

The questionnaire was constructed based on the findings in Study 1 and the pretest. The findings in Study 1 aided in the development of constructs, specifically the use of credibility dimensions as potential predictors for virtual influencer effectiveness and attitude toward the advertisement and brand and purchase intention as outcome variables. The results of the pretest provided the good-fit and poor-fit brands and indicated a need for stratification measures to alleviate potential confounding variables. Thus, stratification was utilized in the main study experiment. The final survey included six sections: (1) introduction, (2) stratification questions (3) demographics, (4) measures of social media use, (5) experimental manipulation, and (6) final measures.

Measures

This experiment asked participants to respond to various measures including: attitude toward the advertisement, attitude toward the brand, purchase intention, perceived trustworthiness, perceived attractiveness, and perceived expertise. All scales

adopted were deemed reliable in prior research: attractiveness, trustworthiness and expertise (Ohanian, 1990), attitude toward the advertisement (Mitchell & Olson, 1981), attitude toward the brand (Spears & Sing, 2004) and purchase intention (Till & Busler, 2000), brand and athlete familiarity (Kent & Allen, 1994), and brand-endorser fit (Till & Busler, 2000).

Sample

A nationwide online sample of adult participants (N=397) were recruited from M-Turk. Based on the length of the survey, about 15 minutes, workers were paid \$0.50 for their participation and completion of the questionnaire. Of the participants, 247 were male, 147 were female and 3 were bi-gender, non-binary or transgender. The majority of the participants identified as Caucasian (65%), joined by African American (10%), Hispanic (9.8%), Asian (8.6%), American Indian/Alaska Native (2.3%), Multi-ethnic (2.3%), other (1%), and Native Hawaiian/Other Pacific Islander (.5%). The mean average age of the respondents was 34 years old, in a pool ranging from 18 to 77 (See Table 2).

Procedures

Prior to starting the survey, participants were given a letter informing them of the study's purpose, benefits, risks, contact information for the investigators and a consent form. Participant consent was necessary for participants to continue with the survey. After reading and agreeing to the consent form, participants were stratified by their responses to whether; (1) they were a soccer fan, (2) they played the Electronic Arts (EA) Sports video game FIFA, and (3) they followed an influencer. Based on their answers to these three questions, participants were routed to different survey pools. For

example, if a participant answered yes they are a soccer fan, no they do not play FIFA, and yes they follow an influencer, they were all sent to the same survey pool. There are a total of eight possible answer combinations for these questions and each combination was filtered into their own survey pool to ensure equal distribution among the experimental groups. After being assigned a survey pool, participants were asked about their demographics and social media consumption habits and then randomly assigned to one of the four experimental groups.

Once assigned to a group, each participant saw two advertisements from the same brand (either Adidas or Coca-Cola) one advertisement with Alex Hunter and one without Alex Hunter. A counterbalancing procedure was used to reduce nuisance variables, so half of participants saw the advertisement without Alex Hunter first and half saw the advertisement with Alex Hunter first. Prior to viewing an advertisement with Alex Hunter, participants were given the association set. After viewing each advertisement, participants were asked about their attitude towards the advertisement and brand and purchase intention. Lastly, participants were asked to indicate their overall perception of Alex Hunter's attractiveness, expertise, and trustworthiness. Participants who finished the study were given a code to enter so researchers would know the individual completed the survey and be able to delete any response without a proper code. The data from all survey groups was collected and analyzed together.

Statistical Analyses

To evaluate whether participants' attitudes and/or behaviors were impacted by the presence of Alex Hunter in an advertisement and whether endorser-product fit enhanced

virtual influencer effectiveness, a repeated measures design was employed. A repeated measure design involves subjects being measured multiple times on the same variables under different experimental conditions (O'Brien & Kaiser, 1985). These conditions result from the crossing or nesting of factors called within-subjects. For this study, the presence of or lack of presence of Alex Hunter in the advertisement was the within-subject. Also, in repeated measure designs there can be factors composed of levels containing independent groups, these are called between-subjects (O'Brien & Kaiser, 1985). For this study, the between-subject factors were the two different brands: Adidas (the good-fit brand) and Coca-Cola (the poor-fit brand).

To assess whether the credibility dimensions, attractiveness, trustworthiness, and expertise, were predictors of a virtual influencer's effectiveness as an endorser, multilinear regressions were used. A multilinear regression is used for estimating the relationship among variables, specifically the relationship between multiple independent variables and one dependent variable (Uyanik & Guler, 2013). This analysis is appropriate for this study because it will quantify whether the perceived attractiveness, expertise and trustworthiness of a virtual influencer predicts consumers' attitude toward the advertisement and brand and purchase intention.

CHAPTER VII

STUDY 2 RESULTS AND DISCUSSION

Pretest Analysis and Results

An analysis of the variance (ANOVA) was conducted to assess participants' familiarity with Coca-Cola, Adidas, and Fly Emirates as a means to control for its effects in the main study (Kent & Allen, 1994). Coca-Cola was the most familiar brand ($M=2.61$, $SD= 1.89$), followed by Adidas ($M=3.07$, $SD= 1.79$), and Fly Emirates ($M=3.91$, $SD= 1.8$). Cronbach's alpha score for brand familiarity was .931. This finding indicated that there was a statistically significant difference between brands ($F(1, 396)=5.26$, $p=.007$). A Tukey post hoc test showed that a statistically significant of familiarity between Coca-Cola and Fly Emirates ($p=.005$). There was not a statistical significance between Coca-Cola and Adidas ($p=.499$) or Adidas and Fly Emirates ($p=.103$).

Additionally, the pretest assessed participants' perception of brand fit with Alex Hunter. Adidas had the greatest product fit ($M =5.54$, $SD=1.24$), followed by Fly Emirates ($M=4.78$, $SD=1.65$), and then Coca-Cola ($M=4.69$, $SD=1.66$). Cronbach's alpha score for brand-fit was .943. An ANOVA revealed a statistically significant difference between the brands ($F(1, 121) = 3.767$, $p = .026$). A Tukey post hoc test showed that participants viewed Adidas as a significantly better brand-fit with Alex Hunter than Coca-Cola ($p=.035$). There was no statistically significant difference between Adidas and Fly Emirates ($p=.73$) and Coca-Cola and Fly Emirates ($p=.964$). Since Fly Emirates was not statistically different from either Coca-Cola or Adidas and

participants were significantly less familiar with Fly Emirates than either Coca-Cola or Adidas, it was removed as a brand in the main study. Coca-Cola and Adidas served as the poor-fit and good-fit groups, respectively.

The pretest also assessed participants' familiarity with Alex Hunter as a means to control the effect in the main study (Kent & Allen, 1994). Overall, participants did not indicate a familiarity with Alex Hunter ($M=4.24$, $SD=1.98$). Cronbach's alpha score for athlete familiarity was .937. This shows that participants are less likely to use prior knowledge about Alex Hunter when evaluating his effectiveness as an endorser.

Furthermore, a two-sample t-test was conducted to evaluate the effect of the different influencer tiers (5k followers vs. 100k followers) on the dependent variables (attitude toward the advertisement, attitude toward the brand and purchase intention). The results showed that there was not a statistically significant difference between the two tiers for attitude toward the advertisement $t(119)=.841$, $p=.40$; attitude toward the brand $t(119)=1.21$, $p=.485$; and purchase intention $t(119)=.596$, $p=.615$.

Despite, there not being a significant difference between the two tiers, the nano tier (5,000 followers) attained higher scores for attitude toward the advertisement ($M_{5k}=4.69$ $SD_{5k}= 1.17$; $M_{100k}= 4.5$ $SD_{100k}=1.2$); attitude toward the brand ($M_{5k}=5.16$ $SD_{5k}= 1.3$; $M_{100k}= 4.85$ $SD_{100k}=1.49$); and purchase intention ($M_{5k}=4.86$ $SD_{5k}= 1.64$; $M_{100k}= 4.7$ $SD_{100k}=1.8$). Since there was not a significant difference between the two different tiers and this was not a main focus of Study 2, the tier manipulation was removed to strengthen the focus on endorser effectiveness.

Lastly, the pretest evaluated potential confounding variables including whether participants; (1) play the Electronic Arts video game FIFA, (2) are a soccer fan, and (3) follow an influencer. A MANOVA showed that there was a statistically significant interaction between participant age, whether they were a soccer fan, whether they followed an influencer and whether they played FIFA. To help control for these variables in the main study, the sample selection was stratified based on participant responses to whether they: (1) play the Electronic Arts video game FIFA, (2) are a soccer fan, and (3) follow an influencer. Additionally, participants' age was treated as a covariate. This was done to reduce extraneous variables.

Main Study Results

Hypothesis 1 posited that advertisements with Alex Hunter would result in a higher attitude toward the advertisement, attitude toward the brand, and purchase intention than advertisements without Alex Hunter. This was confirmed for purchase intention only ($F(3, 393) = 59.429, p < .000, \eta^2 = .131$). While there was a statistical significance for attitude towards the advertisement, ($F(3, 393) = 6.89, p = .009, \eta^2 = .017$), and attitude toward the brand, ($F(3, 393) = 8.281, p = .004, \eta^2 = .02$), participants attitudes were lower after viewing the advertisement with Alex Hunter than the brand advertisement. Means and standard deviations are reported in Table 3. Thus, H1 was partially supported. Further analysis showed there was a significant interaction between the presence of Alex Hunter and order of advertisements, the stratification questions, and the brands effecting purchase intention ($F(14, 726) = 2.28, p = .005$). Means and standard deviations are reported in Table 4.

Hypothesis 2 contemplated the effects of credibility on virtual influencer endorser effectiveness. Descriptive statistics by brand are reported in Table 5. The results showed that attractiveness and trustworthiness were statistically significant at predicting participants' attitude toward the advertisement ($F(3, 376)=120.61, p < .000, R_2 = .49$) and attractiveness, trustworthiness, and expertise were all statistically significant at predicting participants attitude toward the brand ($F(3, 376)= 128.22, p < .000, R_2=.502$). The credibility dimensions were not statistically significant at predicting purchase intention ($F(3, 376)=1.05, p=.37, R_2 = .008$) (See Table 8). Table 6 indicates that trustworthiness had the greatest influence over attitude toward the advertisement ($\beta=.476, p < .001$) closely followed by attractiveness ($\beta =.339, p < .000$). Likewise, Table 7 indicates that trustworthiness also had the greatest influence over attitude toward the brand ($\beta =.364, p < .001$), followed by attractiveness ($\beta =.309, p < .000$), and expertise ($\beta =.122, p=.016$). A correlation table for all dependent variables and the credibility dimensions are reported in Tables 9-11.

A two-sample t-test found that the poor-fit group (Coca-Cola) had a statistically significant higher rating for endorser attractiveness (4.98 ± 1.24) than the good-fit group (Adidas) (4.7 ± 1.45), $t(386)= 2.014, p=.045$. Additionally, the good-fit group (Adidas) had a statistically significant higher rating for endorser expertise (5.46 ± 1.4) than the poor-fit group (Coca-Cola) (5.14 ± 1.35), ($t(378) = 2.27, p=.024$). There was not a statistically significant difference between the two groups for trustworthiness, $t(395)= .013, p=.989$. Further analysis also showed that there was not a significant interaction between counterbalancing groups and perceived credibility. However, it should be noted

that Alex Hunter scored higher on all three credibility dimensions when participants viewed the brand advertisement first (See Table 12).

Hypothesis 3 proposed that brand-fit would have a positive effect on attitude toward the advertisement, attitude toward the brand, and purchase intention. While results showed a significant effect for purchase intention, $F(1, 395) = 3.944, p = .048, \eta^2 = .01$, participants were more likely to purchase a product from the poor-fit brand (Coca-Cola) ($M = 5.13$) than good-fit brand (Adidas) ($M = 4.5$). No effects were found for attitude toward the advertisement and attitude toward the brand, F 's $< 1.50, P$'s $> .25$. Thus, H3 is not supported.

Discussion

Virtual Influencers as Effective Endorsers (H1)

The aim of this study was to evaluate virtual influencers' effectiveness as an endorser (H1). To measure the effects of virtual influencer on attitude toward the advertisement and brand and purchase intention, participants were shown an advertisement with Alex Hunter and an advertisement without Alex Hunter. After viewing each advertisement, participants rated the three outcome variables. The results showed a statistical significance between the two advertisements, however, only purchase intention was rated higher after viewing the advertisement with Alex Hunter. Both attitudes toward the advertisement and brand were rated higher after participants viewed the advertisement without Alex Hunter. While most research supports consumer attitudes as predictors for consumer behavioral intentions (Yoon, 2002), other research

has found that positive attitudes toward the advertisement and brand do not necessarily translate into purchase intentions (Caballero, et al., 1989).

A possible explanation for this finding is the way consumers are using information from influencers on social media to aid in their purchasing decisions. For example, research has found that consumers are electing to engage with influencers to avoid the obvious endorsements from celebrities (Carter, 2016). Thus, this finding suggests that consumers are not interested in blatant advertising and in fact are more persuaded to purchase a product when it is not perceived as an advertisement at all.

Further analysis showed that participants scored their purchase intention higher for both the advertisement with Alex Hunter and without Alex Hunter when participants viewed the advertisement without Alex Hunter first (See Table 4). A possible explanation for these findings is that participants may have been distracted by the presence of Alex Hunter. This was evidenced by the fact that purchase intention ratings increased for the advertisement with Alex Hunter, if participants viewed the advertisement without him first. This indicates that consumers are persuaded by a virtual influencer, but that marketers need to strategically incorporate the endorsement into the post in a manner that displays the product or brand without the virtual influencer being a distraction.

Additionally, participants' purchase intention significantly decreased for the advertisement without Alex Hunter when they viewed the advertisement with Alex Hunter first. This finding aligns with prior literature that endorsers are effective at enhancing purchasing intention (Wang & Scheinbaum, 2018). This also furthers the idea

that consumers do not want the directed advertisements and that the use of an endorser, is more effective at enhancing purchase intentions than professionally brand generated advertisements (Kirkpatrick, 2016).

While the findings represent a departure from the existing literature that endorsers enhance attitude toward the advertisement (Burton & Liechtenstein, 1988) and brand (Percy & Rossiter, 1992), they may indicate that while virtual influencers are treated like human influencers (as evidenced in Study 1), their impact is measured differently. For instance, when consumers are making purchases based off of human influencer posts, they may be making the decision as a result of the endorsement, and not necessarily viewing the endorsement as an advertisement (Carter, 2016). This idea is supported in the literature which found that consumers use influencer endorsements for purchasing decisions instead of obvious endorsements from celebrities (Carter, 2016). Since consumers parasocial interactions with virtual influencers mirror their parasocial interactions with human influencers, it is possible for virtual influencers to have the same effect. As MTM suggests, consumers attribute meanings to an endorser and transfer those meanings to a product and then decide whether they want to adopt those meanings by purchasing the product (McCracken, 1989). The main goal of a marketing campaign is to encourage consumers to use a product or service which will ultimately result in consumers purchase of the product or services and this study found that virtual influencers can achieve this objective.

Although the findings suggest that participants were more persuaded to purchase products endorsed by Alex Hunter, they also indicated a decrease in consumers attitudes

toward the advertisement and brand after viewing an advertisement with Alex Hunter. This could be a result of consumers' increased skepticism of endorsers and the desire for authenticity in endorsements (Charlton & Cornwell, 2019). Earlier studies have found that consumers may be incredulous of a virtual influencer's endorsement because they are not human and cannot provide a genuine endorsement (Matenga, 2018). To facilitate additional inquiry, the credibility dimensions (attractiveness, trustworthiness, and expertise) were measured for their influence on virtual influencer endorser effectiveness.

Impact of Virtual Influencer Credibility and Endorser Effectiveness (H2)

Within the endorsement literature, several studies have emphasized the importance of personal attributes in enhancing an endorser's persuasiveness (Hovland et al., 1966; Kamins & Gupta, 1994, Ohanian, 1990). Overall, the results showed that participants viewed Alex Hunter as credible, scoring his expertise the highest, followed by trustworthiness then attractiveness. The multilinear regressions showed that credibility is a significant factor when predicting attitude toward the advertisement and attitude toward the brand. Specifically, for attitude toward the advertisement, attractiveness and trustworthiness were found to be significant predictors and for attitude toward the brand all three dimensions were found to be significant. These findings are supported and well documented in the endorsement literature (Amelina & Zhu, 2016; Amos et al., 2015; Chung & Cho, 2017; Koo et al., 2012; La Ferle & Choi, 2005).

These findings are important because it shows that consumers are defining virtual influencers in terms of credibility. This finding is especially critical for brand managers because they are able to manufacture the virtual influencers credibility. This was

evidenced by participants scoring Alex Hunter's expertise higher in the Adidas group than the Coca-Cola group. This is not surprising because the perception of expertise has been found to be enhanced when an expertise cue is provided to the audience (Amelina & Zhu, 2016). Expertise was likely heightened in this study through the use of the association set, which provided background information on Alex Hunter's professional soccer career and the Adidas advertisement featured a soccer cleat and the background of the advertisement was a soccer stadium. This pairing is likely what led to the higher expertise rating. It is also possible that the sport brand image of Adidas enhanced Alex Hunter's credibility, since our results showed that Alex Hunter's familiarity ratings were lower than Adidas.

This finding underlines the point illustrated in Umeogu (2012) that a uniqueness with the credibility dimensions is that they are not empirical realities, rather they can be created, managed and cultivated (Umeogu, 2012). A likely explanation for expertise not being a significant predictor for attitude toward the advertisement is that when evaluating an advertisement consumers often subconsciously process executional elements of the advertisement, invoking an emotional or affective response (Shimp, 1981). Typically, when considering expertise consumers are engaged in a deeper cognitive analysis, such as internalization. Thus, when evaluating their attitude toward the advertisement consumers may use the internalization processing mechanism to come to their perception and not consider the virtual influencers expertise.

Contrary to the endorsement literature, credibility was not a significant predictor for purchase intention; yet, this study found that the presence of a virtual influencer did

enhance purchase intention. This indicates that consumers may be considering other variables when evaluating whether to purchase a product endorsed by a virtual influencer. Virtual influencers blur the lines between reality and fiction and serve as a form of entertainment for consumers. To entertain consumers, virtual influencers are posting pictures at live events, wearing trendy clothes and using the latest products. They are selling a lifestyle. Prior research has shown that consumers are having affective parasocial interactions with influencers through social media (Yuksel & Labrecque, 2016) and Study 1 furthered those findings by demonstrating that consumers are having parasocial interactions with virtual influencers through social media. This means that consumers are connecting emotionally and identifying with the virtual influencers. It is through this process that consumers may be motivated to purchase; the idea of living the lifestyle versus using credibility cues to make a purchasing decision.

Furthermore, the negative coefficients for attractiveness and trustworthiness (see Table 9) indicate that as these two variables increase, purchase intention will actually decrease. This is in direct conflict with decades of literature that supports a positive relationship between attractiveness and trustworthiness of an endorser and purchase intention. This could signify a stark distinction between virtual influencers and human influencers, indicating that when marketers elect to incorporate virtual influencers into their marketing campaigns they will need to have a clear understanding of their intended objectives, because creating a storyline aimed at enhancing a virtual influencers credibility may not be the most effective strategy. For example, if the goal of the marketing campaign is to increase purchase intention, then a marketer should try and

connect the virtual influencer to their target audience through the storyline, enabling affective interactions.

These findings represent an important starting point for understanding how consumers define virtual influencers and how those definitions affect their persuasiveness as endorsers. It is well documented in the literature that credible endorsers are more effective than less credible endorsers (Hovland et al., 1996; Ohanian, 1990), however, virtual influencers represent a new type of endorser that has yet to be explored. These findings show that consumers can perceive virtual influencers as credible, but credibility may not be a significant predictor at evaluating their endorser effectiveness. To further explore how virtual influencers endorser effectiveness can be enhanced, brand-endorser fit was analyzed.

Impact of Brand-Endorser fit on Endorsement Effectiveness of Virtual Influencer (H3)

A secondary aim of this study was to evaluate which contexts enhance a virtual influencers endorsement effectiveness, specifically looking at brand-endorser fit. Match-up hypothesis theory suggests that endorsers are more effective when there is congruence between the endorser and endorsed brand (Kahle & Homer, 1985; Kamins, 1990; Koernig & Boyd, 2009). Brand-fit is achieved when the meanings the endorser brings to the advertisement align with the meanings of the brand (McCracken, 1989). The results of this study showed that the poor brand-fit had higher ratings of attitude toward the advertisement, attitude toward the brand, and purchase intention. However, there was only a statistically significant difference for purchase intention.

These findings directly conflict with the match-up hypothesis theory which implies that if there is a lack of fit between the endorser and brand, the evaluation of the advertisement and brand will decline (Kahle & Homer, 1985). However, these findings do align with Schouten and colleagues (2019) who found no significant effects for attitude toward the advertisement or attitude toward the brand with endorser-product fit. Thus, suggesting that brand-fit may not be necessary to enhance endorser effectiveness of virtual influencers. This finding further indicates that virtual influencers may be capable of embodying various meanings and thus “fit” may not be necessary. With new story arcs being created for virtual influencers on a regular basis it is possible that a virtual influencers image could change over-night, implying that they do not have permanent meanings, rather different meanings can be attributed to them within each post.

The fact that the poor-fit group (Coca-Cola) was rated higher than the good-fit group (Adidas) is supported by prior research which found that a slight mismatch is effective at enhancing advertising effectiveness (Kamins & Gupta, 1994). Lee and Thorson (2008) found that endorsements were evaluated more favorable in terms of purchase intention when there was a moderate mismatch than when there was a complete match or an extreme mismatch. While Coca-Cola is not, on its face, as good of a fit with a virtual soccer player as Adidas, Coca-Cola is still a prominent brand in the sport industry and thus participants may already associate the brand with sport (e.g. creating a slight mismatch).

Additionally, it is possible that when consumers perceive a match between a virtual influencer and brand they question the authenticity of the motives behind the creation of the virtual influencer. The literature shows consumers desire for authenticity and transparency, particularly when it comes to endorsements. Consumers may feel that the brand is trying to mislead consumers by creating the perfect endorser. Whereas a brand that is a slight mismatch may be perceived differently because consumers may feel that the brand is using new and engaging technology to reach consumers and not trying to mislead consumers by creating a perfect endorser.

The results of this study demonstrate that virtual influencers can be effective endorsers, but how they are effective and in what context they are effective differs from human influencers and traditional endorsers. This may be partially attributed to the novelty of virtual influencers and consumers still trying to understand and define them in their own terms. As with much exploratory research, this study helped answer questions, but also generated several other questions to be explored in future research.

CHAPTER VIII

GENERAL DISCUSSION

The aims of this exploratory research were to evaluate (1) consumers interactions with virtual influencers and how consumers process and respond to virtual influencer endorsements and (2) whether virtual influencers are effective endorsers. Study 1 found that consumers are having parasocial interactions with virtual influencers just like human influencers. Specifically, consumers are having affective, cognitive, and behavioral parasocial interactions with virtual influencers. Because of these interactions, consumers are able to form strong social relationships with virtual influencers. Prior literature has found that human interactions with robots are social (Reeves & Nass, 1996 & Nass & Moon, 2000) and that human influencers can build parasocial relationships with consumers on social media (Labrecque, 2014). This finding bridges these two studies by demonstrating that humans have parasocial interactions that are social and natural with virtual influencers on social media.

This finding was further analyzed in Study 2, which evaluated a virtual influencers credibility. The findings in Study 1 showed themes of users mentioning the virtual influencers attractiveness or expertise and potentially their trustworthiness. Specifically, almost 20% of the total comments reviewed were about the virtual influencers' physical appearance, displaying an affective response to the advertisement. Study 2 further quantified this finding by showing that attractiveness is a significant predictor for consumers attitude toward the advertisement and attitude toward the brand. Meaning that, marketers should consider the physical appearance of a virtual influencer

for their marketing campaigns because consumers are using a virtual influencers appearance to define and evaluate their effectiveness.

Additionally, Study 1 uncovered potential challenges with the perception of a virtual influencers' expertise or trustworthiness. Some comments made by users referred to virtual influencers inability to use products or participate in activities as a limitation to a genuine endorsement. Study 2 further analyzed this issue and found that in general the virtual influencer (Alex Hunter) was perceived as credible. Moreover, Study 2 showed marketers can enhance perceived expertise by providing cues in virtual influencers storylines or posts to enhance the perception of expertise. For instance, Study 2 found Alex Hunter to be an expert, but several expertise cues were provided to participants, whereas, the virtual influencers analyzed in Study 1 did not have expertise cues in their posts. This implication is supported by MTM where the meanings brands want consumers to attribute to products must be made clear in the endorsement. When the meanings are not clear or enhanced through cues, the transfer of meanings is impeded (McCracken, 1989).

Study 1 demonstrated that MTM also underlies the endorsement process for virtual influencers and that virtual influencers are capable of accumulating meanings and transferring those meanings to a brand or product enticing the consumer to adopt the meanings and purchase the product. Specifically, users in Study 1 indicated an interest in purchasing the products in the virtual influencer's post by asking where the virtual influencers purchased the items. Study 2 also exhibited that virtual influencers are effective at persuading consumers purchasing intentions. However, the means through

which the persuasion occurred still needs to be developed. While the credibility dimensions were significant predictors for attitude toward the advertisement and brand, they were not significant for purchase intention, despite purchase intention being the only outcome variable positively affected by the presence of Alex Hunter in the advertisement. This signals that there is some other element that consumers are using to evaluate virtual influencer endorser effectiveness.

A potential explanation could be that virtual influencers, at their core, are a form of entertainment. A study found that 80% of millennials expect brands to entertain them, and this is exactly what virtual influencers have been found to do (Jade, n.d.). Virtual influencers of varying backgrounds, occupations and stories have emerged to capture the attention of and entertain their followers. With the interactive and storytelling features of social media, virtual influencers are able to put themselves in real-life situations—attending events, going out to eat at the best restaurants, or traveling the world. Virtual influencers are fictional characters of a story that is being played out on social media for consumers to interact and engage with, all while being exposed to brands and products.

The interactivity is critical. Study 1 showed that consumers are interacting with virtual influencers at varying levels. Particularly, consumers are engaging in both internalizing and identification processing mechanisms while interacting with virtual influencers. This means that consumers are connecting with virtual influencers both emotionally and intellectually, becoming invested in the virtual influencers life. It is these interactions that are likely resulting in enhanced purchase intention. The literature provides that interactivity is essential to enhance perceptions of the brand and increase

purchase intentions (Labrecque, 2014). While Study 1 and Study 2 indicated the importance of credibility in predicting virtual influencer endorser effectiveness, it is important to understand that the types of interactions and the processes through which consumers evaluate virtual influencers are also impacting their effectiveness. Some users in Study 1 were so deeply invested in the virtual influencer that they described feelings of love and a desire for a relationship. This suggesting that users do not care about the fictionality of the interaction; they just enjoy the interaction and relationship.

Conversely, some users in Study 1 expressed feelings of irritation towards the use of virtual influencers as endorsers, calling them “ad-bots” and commenting that virtual influencers are inanimate objects incapable of trying, let alone endorsing products. These findings were also reflected in Study 2, which showed that consumers' attitude toward the advertisement and brand decreased after viewing the advertisement featuring Alex Hunter.

Despite the influx of virtual influencers on social media, virtual influencers and artificial intelligence are still new technologies. As with any technology, some consumers take time to adapt and finally adopt (Venkatesh & Bala, 2008). These attitudes may also hint that virtual influencers are more effective with a younger audience. For example, virtual influencers are a cutting-edge technology and this level of innovation may be intriguing for certain demographics. Specifically, millennials and Gen-zers have been found to be the two generations that interact with and follow virtual influencers the most (Hyperaudit, 2020). Additionally, millennials are 2.5 times more

likely to be early adopters of technology than older generations (Jade, n.d.) and Gen-zers have grown up in the presence of these technologies (Kelton, 2017).

While virtual influencers elicit similar interactions and responses as humans, the collective efforts of new technology, storytelling, and interactivity also set virtual influencers apart. Both studies showed evidence that at times virtual influencers are treated similar to humans and other times they are distinct. Together these studies show that virtual influencers are capable of being effective endorsers and offer great opportunities for strategic marketing campaigns.

Implications

Theoretical Implications

The findings in Study 1 were underlined by MTM and Source Credibility Model. Specifically, every time that users attribute meanings to virtual influencers, transfer those meanings to the endorsed brand or product and then adopt the meanings by purchasing the products. Every stage of MTM was evident in Study 1's content analysis, where users discussed the meanings of the virtual influencer in terms of attractiveness and expertise, then transferred that meaning to the brand and showed their adoption of the meaning(s) through their behavioral interactions. MTM and Source Credibility Model were also apparent in Study 2 where participants defined the virtual influencer in terms of credibility and the credibility dimensions were found as significant predictors for virtual influencer endorser effectiveness. Despite the credibility dimensions not being as significant with virtual influencers as human influencers, there was still an effect.

These studies represent a clear extension of MTM to parasocial interactions with virtual influencers on social media. Prior to this study, scholars have not contemplated the cognitive endorsement process for virtual influencers. Additionally, this research furthers the Source Credibility Model with its finding that credibility may not be as influential for virtual influencers as it is for human influencers. While Study 1 showed that consumers considered a virtual influencers' physical appearance when evaluating their post, Study 2 found that credibility did not have a significant effect on purchase intention. Source Credibility Model suggests that the three dimensions are the most effective predictor of persuasiveness of a message; these findings indicate that there are other dimensions or meanings that are attributed to virtual influencers that are more effective at predicting their persuasiveness. Thus, this study highlights a theoretical gap for scholars to understand and explain virtual influencers as effective endorsers. For example, Source Credibility Model was found to be inconsistent and insufficient to predict virtual influencer endorser effectiveness.

Managerial Implications

Although, the work presented here is still in its infancy, multiple implications can be gleaned from the results. First, brand managers can utilize virtual influencers in marketing campaigns to increase purchase intention. However, marketing managers must have a complete understanding of their target audience. The results of this research indicated that certain consumer characteristics may influence their perception of a virtual influencer endorser. Additionally, brand managers should carefully construct the virtual influencer's story arcs to fit with the target audience to enhance opportunities for

identification and internalization. Study 1 indicated that consumers are interacting with virtual influencers, thus creating an opportunity for brands to connect with their consumers at a deeper level than traditional marketing affords. Particularly, virtual influencers give marketers the opportunity to personify their brand, take the meanings they want to be associated with their brand and product, and create a virtual influencer that embodies them.

Moreover, consumers are accepting virtual influencers. They are interacting with them on social media just as they would another human. This finding is extremely valuable for marketers because it shows that consumers are receptive to marketing messages from virtual influencers on Instagram. Prior studies have shown that parasocial interactivity is foundational to forming positive brand attitudes and purchase intention (Labrecque, 2014; Yuksel & Labrecque, 2016). Understanding the different types of interactions between a virtual influencer and consumer is the first step to capitalizing on virtual influencers marketability because these interactions indicate how consumers are responding to virtual influencer posts.

Further, Study 1 illustrated that consumers respond and connect to virtual influencers through cognition, affection and conative (behaviors). This is important for brand managers because cognitive responses indicate that consumers are able to develop deep relationships with virtual influencers. This means that brand managers are able to create complex storylines for their target audience to invest and become intertwined with, furthering their marketing objectives. Also, consumers are using affection to respond to virtual influencers. This indicates a superficial level of processing and that

brand managers can connect with consumers through perceived similarity or attractiveness, suggesting that marketers should use an attractive virtual influencer and one that relates to their target audience. Finally, consumers interact with virtual influencers connotatively, meaning they mimic real world behaviors. For example, in Study 1, consumers were engaging in eWOM, which is the virtual way for consumers to share their opinion about the brand. Thus, virtual influencer campaigns can reach further than their followers and extend to others whom followers have tagged.

Additionally, brand managers do not need to feel limited to selecting a virtual influencer based on brand-fit. In fact, this research showed that a slight mismatch was more effective at enhancing purchase intentions. Thus, when considering a virtual influencer as a marketing tool, the ability to select without the limitation of brand-fit is important because there are currently a limited number of existing virtual influencers. Also, for brand managers who are looking to create a virtual influencer, this means that they do not have to pigeon hole their virtual influencer to fit one particular brand or product, making virtual influencers a very versatile marketing tool. This does not mean that an organization should not create a virtual influencer for the purpose of representing a singular brand or product. Rather this study suggests that brand-fit does not have the same role in predicting endorser effectiveness for virtual influencers as it does for human endorsers. Particularly, a virtual influencer that is too ideal (too good of a fit with the brand) may result in decreased effectiveness.

Moreover, brand managers should consider establishing virtual influencers credibility. This research showed that virtual influencers are capable of amassing

credibility, but credibility may not be as strong of a predictor of effectiveness as it is for human endorsers. Although Study 2 demonstrated that as attractiveness and trustworthiness were enhanced, consumers' purchase intention decreased.

This research does not suggest that brands should do away with their traditional marketing techniques, but rather marketers should start to incorporate virtual influencers into current campaigns to reach different audiences. Together millennials and gen-zers spend \$366.5 billion annually (Bedgood, 2019). This represents tremendous purchasing power that is only expected to grow. Social media has changed our society, specifically the prolific use of social media to aid in purchasing decisions. This research has shown that consumers engage and interact with virtual influencers posts, making virtual influencers an ideal conduit for brands wishing to connect and interact with their target audience.

Legal Implications

While virtual influencers demonstrate a myriad of marketing opportunities and benefits to brands (e.g. being able to control their appearance, storyline, and posts) there may be some legal challenges. Out of the 51 branded posts reviewed in Study 1, only 1 post adhered to the Federal Trade Commission's (FTC) guidelines. The FTC requires that any endorsement on social media should be made obvious that there is a relationship between the endorser and the brand (Federal Trade Commission, 2020).

It is important for brands who are using virtual influencers to maintain a level of authenticity, transparency, and trustworthiness with their consumers (Brison et al., 2013). This research found that consumers may not trust a virtual influencer because of

lack of authenticity and by companies not disclosing the relationship between virtual influencers and the endorsed brand, consumers may be further irritated with the advertisement. Additionally, FTC violations could require modification or discontinuance of a campaign, as well as result in monetary fines (Federal Trade Commission, 2014). As virtual influencers become more prevalent in marketing strategies, the FTC will likely closely monitor virtual influencer marketing campaigns and companies will want to avoid a false advertisement investigation by the FTC. The FTC is consistently providing content to companies to aid in the prevention of violations of the Federal Trade Commission Act (Brison et al., 2016). Thus, marketers should be cognizant of the FTC obligations, even when using virtual influencer (Roinskaplan.com, 2019).

Limitations and Future Research

Although this study is one of the first to investigate the effects of virtual influencers on advertising effectiveness, it is not without its limitations. First this study was focused on a single endorser (i.e., Alex Hunter) and two brands (Coca-Cola and Adidas). Although, the purpose of this research was to assess the effectiveness of virtual influencers as endorsers, the hypotheses presented here should be tested across a wider range of brands and virtual influencers to determine the extent to which the results can be generalized. Additionally, while there are some advantages to using fictitious advertisements, it is possible that the use of such stimuli skewed the results. For example, the level of realism of the advertisement may have impacted participants'

attitude toward the advertisement and brand. However, utilizing fictitious advertisements allowed for extraneous variables to be controlled.

A second potential limitation concerns the internal validity of the study design. Although, previous research has utilized popular brands (Schouten et al., 2019), it is difficult to completely control for the effects of brand familiarity. During the pre-test both Coca-Cola and Adidas were scored as very familiar brands with the participants. As such, future research should attempt to explore the effects of virtual influencers with unfamiliar brands or products. This can be accomplished through the use of a fictitious brand or product.

Additionally, future research should evaluate the moderating effects of the credibility dimensions on virtual influencers endorser effectiveness. This research was limited in that it only examined the relationship of virtual influencer credibility on the advertising outcomes rather than exploring how credibility impacts the effectiveness of virtual influencers as endorsers. Further, future research should explore other theoretical frameworks for predicting virtual influencer endorser effectiveness. Specifically, scholars should use the technology acceptance model to analyze consumers acceptance of virtual influencers.

Moreover, consumers' believability of virtual influencers should be tested. While this research found Alex Hunter was a credible source, there is still a question of believability. Prior research suggestions that an endorser's believability is just as critical to predicting their effectiveness as an endorser as credibility (Mowen & Brown, 1989). Likewise, consumer's perceptions of authenticity of virtual influencers should be

evaluated. Consumers have demanded more authenticity from brands in their marketing efforts (Charlton & Cornwell, 2019) and virtual influencer authenticity may be doubted. Also, future research should focus on the personality characteristics, as well as age, of the consumers who both accept and reject virtual influencers. There is industry research that suggests certain generations are more equipped to accept the blurred lines between real and virtual worlds, however, a deeper dive into personality characteristics can shed more light on that phenomena.

Moreover, since the pretest showed that there was not a significant finding between influencer levels, further analysis should focus on exploring this phenomena. Although, prior research found that the number of followers of an influencer does not impact the effectiveness of the advertisement (Cha et al., 2010; De Veirman et al., 2017). The pretest did show that the nano tier (5,000) followers had higher scores for attitude toward the advertisement, attitude toward the brand and purchase intention. This finding aligns with the industry shift to focus on using nano influencers rather than the mega influencers with strong digital presence. More studies are needed to help generalize the findings and compare the effect of number of followers on the different social media platforms.

Lastly, additional research should focus on analyzing comments on all virtual influencer posts, not just branded ones. The effectiveness of a virtual influencer appears to be hinged on a virtual influencers' storytelling ability. On Instagram, these stories are told through captions, pictures, and videos. Virtual influencers social media pages are a wealth of telling information about how both the virtual influencer and consumers

navigate the blended virtual and real worlds. Such exploration could include a comparison of virtual influencers on the different social media platforms. Understanding how and why consumers engage with virtual influencers on specific social media platforms can help set the foundation for a successful marketing campaign. While this study represents a crucial first step towards understanding virtual influencers as endorsers, additional research is needed to generalize and extend the scope of these findings.

CHAPTER IX

CONCLUSION

The results from this study provide a foundational understanding of the effectiveness of virtual influencers as endorsers. More specifically, the findings show that humans are interacting and responding to virtual influencer similarly as human influencers. Thus, consumers are applying traditional social roles to virtual influencers on social media, creating opportunities for parasocial relationships to form. Further, empirical findings provide that virtual influencers are effective endorsers and increase purchase intention. When determining how to predict virtual influencer effectiveness this study found that credibility is a significant predictor for attitude toward the advertisement and brand, but not purchase intention and that a slight mismatch between endorser-brand fit may enhance effectiveness. Although endorsement research has been conducted for decades, the present study adds to that body of literature by examining the newest type of endorser, a virtual influencer. In addition, the results of this study provide important theoretical and practical insights into how consumers interact with virtual influencers and define them in terms of meanings and credibility.

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APPENDIX A

MEASURES

Attractiveness

Five items adapted from Ohanian (1990) were used to measure the perceived attractiveness of the virtual influencer. The items were anchored on a 7-point semantic differential scale with endpoints unattractive/attractive, not classy/classy, ugly/beautiful, plain/elegant, and not sexy/sexy.

Trustworthiness

Endorser trustworthiness was assessed by using the credibility scale by Ohanian (1990). Five items were used to measure the endorser's trustworthiness. The items were anchored on a 7-point semantic differential scale with anchor points: undependable/dependable, dishonest/honest, unreliable/reliable, insincere/sincere, and untrustworthy/trustworthy (Ohanian, 1990).

Expertise

Endorser expertise was assessed by using the credibility scale by Ohanian (1990). Five items were used to measure the endorser's trustworthiness. The items were anchored on a 7-point semantic differential scale with endpoints: not expert/expert, inexperienced/experienced, not knowledgeable/knowledgeable, unqualified/qualified, and unskilled/skilled (Ohanian, 1990).

Attitude toward the ad

Four items from Mitchell and Olson (1981) were used to assess attitude toward the advertisement. The items were anchored on a 7-point semantic differential scale with

bi-polar endpoints: bad/good, dislike/like, not irritating/irritating, uninteresting/interesting. These measures have been widely used in the endorsement literature and have been proven to be valid and reliable in empirical data sets (e.g. Schouten et al., 2019).

Attitude toward the brand

Five items from Spears and Singh (2004) were used to measure attitude toward the brand. Participants responded to the following phrase “Please describe your overall feelings about the brand described in the ad you just saw.” The phrase was anchored by a 7-point semantic differential scale with anchor points: unappealing/appealing, bad/good, unpleasant/pleasant, unfavorable/favorable, unlikeable/likable.

Purchase Intention

Three items from Till and Busler (2000) were used to measure purchase intentions of the endorsed product. Participants responded to the following phrase, “How likely is it that you would consider purchasing the endorsed product?” The phrase was anchored on a 7-point semantic differential scale with anchor unlikely/likely, definitely not/definitely would, and improbable/probable.

Brand Familiarity

Three-item from Kent and Allen (1994) were used to measure brand familiarity. Participants were asked about their familiarity of either Adidas, Coca Cola, or Fly Emirates. The response anchors included: *familiar/unfamiliar*, *experienced/inexperienced*, and *knowledgeable/not knowledgeable* and were on a 7-point semantic differential scale (Kent & Allen, 1994; Lohneiss & Hill, 2014).

Athlete Familiarity

Three-item from Kent and Allen (1994) were used to measure athlete familiarity. Participants were asked about their familiarity with Alex Hunter. The response anchors included: *familiar/unfamiliar, experienced/inexperienced, and knowledgeable/not knowledgeable* and were on a 7-point semantic differential scale (Kent & Allen, 1994; Lohneiss & Hill, 2014).

Brand Endorser Fit

A three-item, 7-point semantic scale designed by Till & Busler (2000) was used. Endpoints for the items were: *does not belong with/ belongs with, does not go together/ goes together, and does not fit together/ fit together*.

APPENDIX B

FIGURES



Figure 1. Adidas Advertisement



Figure 2. Adidas and Alex Hunter advertisement.



Figure 3. Coca-Cola and Alex Hunter Advertisement



Figure 4. Coca-Cola Advertisement



Figure 5. Fly Emirates advertisement.

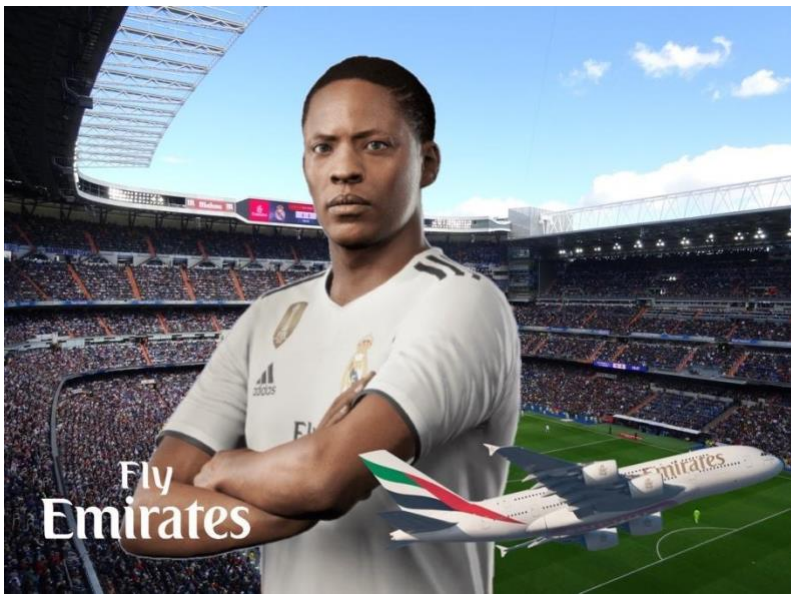


Figure 6. Fly Emirates and Alex Hunter advertisement.

APPENDIX C

TABLES

Table 1

Virtual Influencer Follower Comments

<u>Comment Code Theme</u>	<u>n</u>	<u>%</u>
Cognitive Interactions	83	6%
Affective Interactions	803	61%
Behaviors Interactions	172	13%
Foreign language	127	10%
<u>Other</u>	<u>128</u>	<u>10%</u>

Table 2

Main Study Demographics

Demographic Category	n	%
Race		
Caucasian	258	65%
African American	42	10.6%
Hispanic	39	9.8%
Asian	34	8.6%
American Indian/Alaska Native	9	2.3%
Native Hawaiian/Other Pacific Islander	2	5%
Multi-ethnic	9	2.3%
Other	4	1%
Gender		
Male	247	62.2%
Female	147	37%
Bi-gender/Non-binary/Transgender	3	.8%
Soccer Fan		
Yes	195	49.1%
No	202	50.9%
Play FIFA		
Yes	181	45.6%
No	216	54.4%
Follow Human Influencer		
Yes	201	50.6%
No	196	49.

Table 3

Mean Scores and Std Dev. for the Ad. Without Alex Hunter and With Alex Hunter

	Att. Ad				Att. Br.				PI			
	Coca-Cola		Adidas		Coca-Cola		Adidas		Coca-Cola		Adidas	
Presence of Alex Hunter in Ad	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Without Alex Hunter	5.35	1.44	5.26	1.42	5.38	1.4	5.2	1.34	4.1	2.25	3.99	1.99
With Alex Hunter	5.2	1.4	5.1	1.47	5.2	1.34	5.07	1.5	5.13	1.8	4.56	1.92

Table 4

Means and Standard Deviation of Interaction effects between PI, Stratification, Counterbalance and Brand type

Outcome Variable	Stratification Group	Counterbalance Group	Brand	<i>Mean</i>	<i>SD</i>
Purchase Intention (without Alex)	NNN	No Alex First	Coca-Cola	5.67	1.22
			Adidas	4.27	1.52
		With Alex First	Coca-Cola	1.69	1.378
			Adidas	3.69	2.24
	NYY	No Alex First	Coca-Cola	5.97	1.17
			Adidas	4.64	2.14
		With Alex First	Coca-Cola	2.79	1.76
			Adidas	3.36	1.19
	YYY	No Alex First	Coca-Cola	5.98	1.28
			Adidas	5.25	1.71
		With Alex First	Coca-Cola	2.88	2.03
			Adidas	2.71	2.09
NNY	No Alex First	Coca-Cola	6.22	.97	
		Adidas	4.64	1.79	
	With Alex First	Coca-Cola	2.25	1.77	
		Adidas	3.42	2.22	

NYY	No Alex First	Coca-Cola	5.17	.98
		Adidas	5.9	1.27
	With Alex First	Coca-Cola	2.38	1.62
		Adidas	1.92	1.39
YNN	No Alex First	Coca-Cola	4.97	2.15
		Adidas	5.28	1.3
	With Alex First	Coca-Cola	2.22	1.12
		Adidas	2.46	1.36
YNY	No Alex First	Coca-Cola	5.78	1.05
		Adidas	5.49	1.42
	With Alex First	Coca-Cola	2.02	1.11
		Adidas	2.71	1.88
YYN	No Alex First	Coca-Cola	6.04	1.25
		Adidas	5.04	2.02
	Alex First	Coca-Cola	2.44	1.19
		Adidas	2.67	1.78

Table 5

Mean Scores and Std Dev. for Alex Hunter Credibility by Brand

	Attr.		Trust.		Expertise	
	Coca-Cola	Adidas	Coca-Cola	Adidas	Coca-Cola	Adidas
<i>M</i>	4.98	4.7	5.04	5.04	5.14	5.46
<i>SD</i>	1.24	1.45	1.15	1.23	1.35	1.4

Table 6

Relationship between Credibility Dimensions and Attitude toward Ad_____

Dependent Variable	Independent Variable	ANOVA		Coefficient		
		<i>F</i>	<i>P</i>	Beta	Sig.	R ²
Att. Ad.	Attractiveness	120.61	.000	.339	.000	.490
	Trustworthiness			.376	.000	
	Expertise			.057	.273	

Table 7.

Relationship between Credibility Dimensions and Attitude toward Brand_____

Dependent Variable	Independent Variable	ANOVA		Coefficient		
		F	Sig.	Beta	Sig.	R ²
Att. (Coke)	Ad. Attractiveness	126.83	.000	.309	.000	.502
	Trustworthiness			.364	.000	
	Expertise			.122	.016	

Table 8

Relationship between Credibility Dimensions and Purchase Intention

Dependent Variable	Independent Variable	ANOVA		Coefficient		
		F	Sig.	Beta	Sig.	R ²
Purchase Intention (Coke)	Attractiveness	1.052	0.370	-.03	.678	.008
	Trustworthiness			-.018	.830	
	Expertise			.114	.113	

Table 9

Standard Deviations, and Correlations Attitude Toward the Advertisement and Credibility

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Att. Ad	5.08	1.49			
2. Attractiveness	4.85	1.34	.620**		
3. Trustworthiness.	5.03	1.23	.678**	.738**	
4. Expertise	5.26.	1.39	.442**	.560**	.688**

Table 10

Standard Deviations, and Correlations Attitude Toward the Brand and Credibility

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Att. Brand	5.08	1.44			
2. Attractiveness	4.85	1.34	.639**		
3. Trustworthiness.	5.03	1.23	.699**	.738**	
4. Expertise	5.26	1.39	.540**	.560**	.688**

Table 11

Standard Deviations, and Correlations Purchase Intention and Credibility

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Att. Brand	4.79	1.88			
2. Attractiveness	4.85	1.34	-.017**		
3. Trustworthiness.	5.03	1.23	.018**	.738**	
4. Expertise	5.26	1.39	.083**	.560**	.688**

Table 12

Counterbalance Group Mean Scores and Std. Dev. for Credibility

	Attractive		Trustworthiness		Expertise	
	No Alex Hunter First	Alex Hunter First	No Alex Hunter First	Alex Hunter First	No Alex Hunter First	Alex Hunter First
Mean	4.88	4.79	5.06	5.02	5.35	5.27
Std. Dev.	1.28	1.45	1.17	1.22	1.39	1.38