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Anthropomorphism and word-of-mouth
communication in online social networks

by

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"Nothing in this world can take the place of persistence. Talent will not; nothing is more common than unsuccessful people with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent. The slogan "press on" has solved and always will solve the problems of the human race"

Calvin Coolidge, 30th President of the United States

ABSTRACT

This exploratory research examined the potential for online social networks to provide the context for humans to anthropomorphize companies in a way that leads to new considerations of electronic word-of-mouth communication (eWOM); specifically, the possibility for organizations to be the initiator of the communication. Traditional models of word-of-mouth communication show individuals as the starting point for word-of-mouth communication but online social networks have created an environment in which humans may respond to organizations in social ways and engage an organization in communication previously considered to be restricted to human-to-human interaction. The impact of group status, loneliness, trust, credibility, interpersonal influence, and behavioral cues in social situations were considered as important influences in this new view of eWOM.

Two exploratory surveys (Study 1), two experiments (Study 2 (Forced *Like*) & Study 3) and content analysis (Study 4) were the primary tools of investigation. The two exploratory surveys involved questions related to Facebook use, interaction with individuals and firms on Facebook, and questions related to the importance of brand influence. Information from the exploratory surveys was used to create appropriate experimental conditions later in the research. For example, it was determined that a fictional travel firm should create less of a confounding impact on the experiments because travel firms were perceived as having a lower level of brand influence during the exploratory surveys.

The two experiments conducted in Study 2 and Study 3 were nearly identical in that both studies involved a 2x2 between subjects design with random assignment of participants to one of the four conditions. Both studies involved the independent variables of group status (in-group or out-group) and level of positive social communication (high or low). Additionally, both studies

involved the same questions related to a fictional travel firm's Facebook page. Participants responses to questions related to anthropomorphism, word-of-mouth communication, loneliness, need for social cues and general Facebook use.

The difference between Study 2 and Study was that Study 2 involved a *Forced Liking* component. That is, subjects in Study 2 in the in-group status conditions were directed to click on the *Like* button for the travel firm's Facebook page whereas participants in Study 3 who were in the in-group conditions were only asked to imagine having clicked on the *Like* button on the travel firm's Facebook page. Study 2 is referred to hereafter in this document as Study 2 (Forced *Like*).

The findings of the research show a variety of results. It was expected that increased positive social communication between organizations and others within Facebook would generate social responses from subjects and this was supported in experimental Study 2 (Forced *Like*) (Forced *Like*) but not in Study 3. Group status was not found to increase anthropomorphism in either study but both studies showed significant correlation between individuals who did anthropomorphize an organization in an online social network and an interest in word-of-mouth communication. While increases in positive social communication did lead to significant increases in trust of an organization by individuals in Study 2 (Forced *Like*) such increases were not found in Study 3. Neither study found support for the idea that individuals forming a relationship with an organization in an online social network will cause an increase in the willingness to engage in word-of-mouth communication. Individuals self-reporting as more lonely were expected to anthropomorphize more and this was supported in Study 2 (Forced *Like*) but not in Study 3. Individuals reporting a higher reliance on interpersonal influence in consumer decision making situations were expected to be more likely to

anthropomorphize a business in an online social network and this was supported in Study 3 but not in Study 2 (Forced *Like*). It was also predicted that subjects with a higher self-reported need for behavior cues would also be more likely to anthropomorphize and while this was not supported in Study 3 there was significant support in Study 2 (Forced *Like*). Finally, the level of trust subjects had for companies *Liked* on Facebook prior to the study was expected to show a correlation to the likelihood to anthropomorphize a business in the experiments. This was supported in Study 3 but not in Study 2 (Forced *Like*).

Content analysis conducted through unobtrusive observational analysis resulted in a number of interesting possible themes related to anthropomorphic responses to organizations by Facebook users. Anthropomorphic themes involved social motivation, effectance motivation and elicited agent knowledge. Additionally, the Content analysis seemed to uncover themes involving word-of-mouth communication within the online social network including themes involving self-disclosure and trust.

Overall, the results for this exploratory research provide direction for future research related a new model of word-of-mouth communication within online social networks although there are numerous lingering questions regarding the reasons for differing results in several important parts of the experiments.

CHAPTER 1. INTRODUCTION

Online social networks have increased in size and scope rapidly (Trusov, Bodapati, & Bucklin, 2010) and research related to online social networks continues to evolve. Online social networks, such as Facebook, involve individuals and organizations who are typically connected in the physical world and have confirmed identities but who interact in an online environment. This provides a relatively new context for examining the intersection of human-computer interaction and other disciplines such as marketing, psychology, communications, sociology, computer science and many others. Human computer interaction, as a discipline, is uniquely poised to address questions related to how these different disciplines manifest within online social networks. Specifically, this research sought to explore anthropomorphism of organizations by individuals within online social networks and, specifically, social responses to such organizational activities as word-of-mouth communication.

Anthropomorphism is broadly defined as human beings projecting upon or perceiving non-human entities to have human-like qualities. Anthropomorphism has been studied within many disciplines such as psychology (Epley, Waytz, & Cacioppo, 2007), anthropology (Darwin, 1872/2002), marketing (Aggarwal & McGill, 2012), religion (Benavides, 1995), human-computer interaction (Eyssel, Kuchenbrandt, & Bobinger, 2011), and communication (Lee, 2010).

Within the broad area of anthropomorphism many theories attempt to describe human perceptions of, and interactions with, non-human entities. Some researchers, such as Guthrie (1993), have focused on how movement of an object may encourage anthropomorphism. Kim and McGill (2011) examined how humans risk behavior changed after interacting with objects that had physical characteristics similar to humans. Piaget (1929) investigated how human beings

need to understand (i.e. effectance motivation) or make sense of the world could lead to attributing conscious thought to non-human entities. In similar, but much later research, Pankaj & McGill (2012) suggested that behavioral priming may lead to anthropomorphism of products or brands. Behavioral priming and heuristics share certain qualities making Kim and Sundar's (2012) investigation of the ways different heuristics impacted anthropomorphism relevant to the current study. Another area of anthropomorphic research involves social response to media, technology and computers as social actors. For example, Aharoni and Fridlund (2006) found that subjects perceived human interviewers and computer interviewers as similarly social and likable. Previous research into paradigms such as Computers as Social Actors (Lee, 2010) and Social Response Theory (Nass, Fogg, & Moon, 1996; Moon, 2000; Nass & Moon, 2000) will be placed together underneath the umbrella of anthropomorphism within this document. And, for purposes of this research, debate was set aside, concerning whether the associations related to anthropomorphism are mindful or mindless (Kim & Sundar, 2012). Instead, for this research, the possibility that both may co-exist was accepted in accordance with Lee's (2010) findings. Using that framework for the research, anthropomorphism and Social Response Theory were both used to investigate ways humans may accept interaction with a technology representation of a business (i.e. a business Facebook page) as similar to interacting with another person. Social Response Theory has not been tested in a situation where an organization's *Profile*, representing an organization in an online social network, has been the initiator of electronic word-of-mouth marketing (eWOM). The idea of an organization being the initial source of word-of-mouth communication is at odds with traditional definitions of word-of-mouth communication. However, a number of other researchers seem to be pursuing similar areas of study. For example, Kim and Sundar (2012) investigated anthropomorphism within the context of a website and

Wang, Baker, Wagner, and Wakefield (2007) explored how organizations have used the internet to create human-like personas (i.e. avatars) to represent their organizations. Research published in the Journal of Marketing (Kozinets, de Valck, Wojnicki, & Wilner, 2010; Trusov, Bucklin, & Pauwels, 2009) explored the role of electronic word-of-mouth communication in online communities and previous research, such as Terveen & McDonald (2005), explored online social recommendation systems. However, even Kozinets et al.'s (2010) relatively new "network coproduction model" (p. 72) of eWOM communication (see Figure 1) and Trusov, Bodapati, and Bucklin's (2010) research restricted the initiation of the eWOM to humans interacting with humans albeit with influence by firms. Additionally, much of the previous research into word-of-mouth communication online focused on interactions between individuals who were unknown to each other or whose identity could not be confirmed.

A: The Organic Interconsumer Influence Model

B: The Linear Marketer Influence Model

C: The Network Coproduction Model
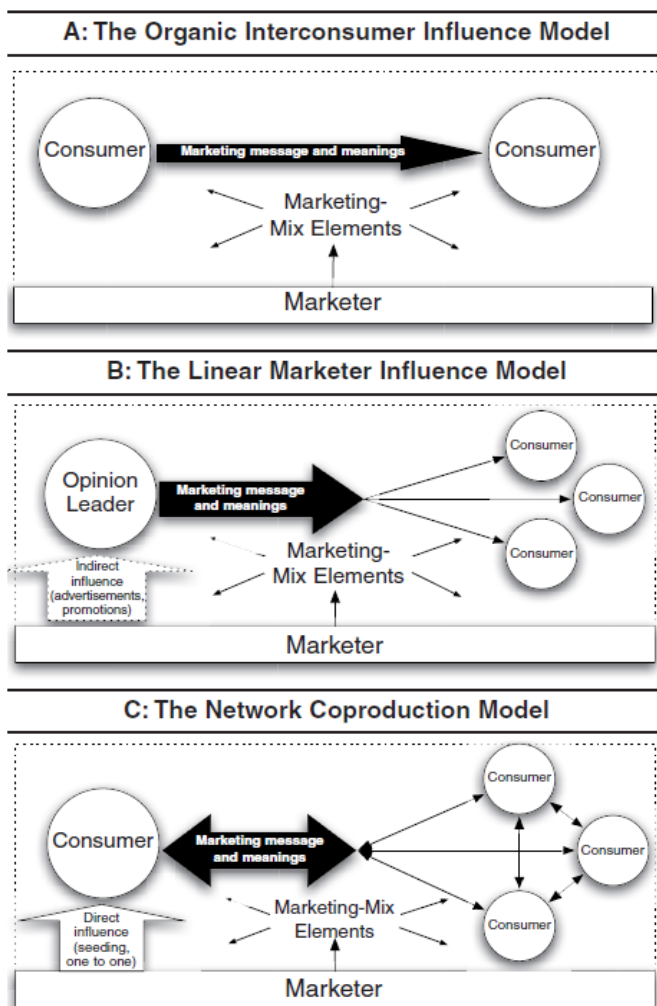
Figure 2_Kozinets, de Valck, Wojnicki, & Wilner (2010)
Network Coproduction Model of electronic word-of-mouth
communication.

Brown, Broderick and Lee's (2007) case study analysis explored the possibility that a web site could be considered a principle participant in word-of-mouth communication and their work could be viewed as a starting point for the research presented here. However, even the Brown et al. (2007) model placed "site usage" (p. 14) by the individual, and comments by the individual, as the beginning of the word-of-mouth communication as opposed to an actual message delivered from the site in an anthropomorphic way. Therefore an investigation of the

potential for individuals to anthropomorphize organizations within online social networks and receive electronic word-of-mouth communication from the organization was warranted.

The application of anthropomorphism to electronic word-of-mouth communication within an online social network has not been fully explored. The impact of such an application on the understanding of communication between individuals and organizations creates a new research opportunity in the areas of human-computer interaction and marketing. This exploratory research was intended to create a foundation for future work in development of a model(s) of communication that takes the relatively new context of online social networks, and the resulting human communication interactions, into account.

Context of study: A focus on Facebook

The context of this study is the online social networking platform, Facebook. Facebook began in February of 2004 and the relatively brief history of the organization corresponds with the evolving nature of communication on the platform and the exploratory nature of this research into that communication.

For this research, online social networks will be defined as internet based environments of interconnected individuals and organizations, represented by their true identity and imagery, who willingly interact, and who are often affiliated in the off-line world. Information presented about such networks will be presented in traditional terms such as word-of-mouth communication but this work will also use italics and capitalization to highlight the terms used by the online social networking community in general and Facebook specifically. For example, the term *Friend* is used within Facebook to denote an individual person who has agreed to be connected to another person on the site whereas the term *Wall Posting* refers to a comment or

photo posted as part of an individual's or an organization's Facebook *Profile*. In most cases, the word "online" will be used throughout this work, instead of the term "virtual", to describe platforms such as Facebook. Although an online social network is clearly not the same as the physical world, the term virtual environment as described by Mennecke, Triplett, Hassall, Conde, and Heer (2011) as "3D spaces"…involving "virtual bodies" (p. 414) is not appropriate for an online social network.

Facebook users are able to create personal *Profiles* and include many personal details about themselves and their preferences. Users can post information on their *Profiles* in a variety of places including areas for photos, living location, relationship status, family connections and other personal information. An important distinction between Facebook and many other types of internet based communication such as online product reviews, chat rooms and many blogs is the accuracy of representation of the individuals on the site. The accuracy of information related to users is partially due to the fact that individuals connected by Facebook typically know each other in the real world and so faking of gender or age is generally difficult without the behavior being noted by others. Also, researchers such as Tosun (2012) found that users typically report being motivated to display their "true self" (p. 1510) because they used the site to communicate with friends, family, and individuals who they want to interact with using their off-line identity. Finally, Facebook utilizes complicated computer algorithms to analyze interactions, and connections on the network to identify irregularities. For example, Vaas (2012) reported a case in which Facebook employees were able to alert authorities after determining an older man was trying to solicit sex from a teen girl.

One of the sections of each Facebook user's *Profile* that allows for postings by the user and others is called the *Wall*. Each Facebook account, including accounts representing an

organization, has a *Wall* and the ability to determine who is allowed to post comments on it. Additionally, information written on a user's *Wall* is disseminated to other users on Facebook based on interconnections with other people and organizations and privacy settings determined by the user. Within Facebook the individuals a user chooses to connect with are referred to as *Friends*. *Friend* relationships are the primary mode for determining who does and does not see particular types of information posted by users. Individuals and organizations connected on Facebook can create further connections to content through the use of *Tagging*.

When users post information such as written comments, videos, photos, or hyperlinks, other users have the opportunity to view and comment on the information. Another important term within Facebook is the concept of *Liking*. Although *Liking* seems ubiquitous throughout popular culture the feature has only existed since 2010. *Liking* is used in several important ways. First, if human users wish to connect their Facebook *Profile* to the *Profile* of an organization the user will click on a *Like* button on the organization's Facebook *Profile* page. The effect is similar to *Friending* a person. That is, when users *Like* an organization it creates a communication connection between the organization and the user so that postings made within the site by either are generally visible by both as well as by other individuals and organizations connected to both. A similar type of *Liking* connection can be made between users of Facebook and *Fan Pages* which represent famous individuals such as Bono or causes such as breast cancer awareness. Another use of the term *Like* within Facebook relates to user's ability to cast a favorable vote for items such as *Wall* posting comments, photos, and events. *Liking* a posting or photo is an extremely efficient way for individual users and the Facebook community as a whole to show support. When a posting is *Liked* by a user a numerical total is shown by the posting as is a link to the user who did the *Liking*. This creates a trail of interconnected word-of-mouth

communication between identified individuals, who have been legitimized via their existing relationships, which is different from previous online discussion boards that often dealt with anonymous users.

The new communication tools (e.g. *Wall Postings* and *Liking*) and context (e.g. interconnectedness of *Friends*) provided by social networking sites such as Facebook allow for variations on previous types of anthropomorphism and word-of-mouth communication. For example, Facebook users employ the identical process to *Like* a celebrity as they would to *Like* a company. This blurs the distinction between humans and organizations. Additionally, the ability of a user or an organization to post dyadic comments to an in-group user and have the comment receive votes of approval (i.e. *Likes*) from other users represents a relatively new communication dynamic.

Statement of Problem and Opportunity

Social networking sites have seen large usage rate increases and research institutions are pressed to keep up with the expansion. For example, Madden (2010) noted that "Between April 2009 and May 2010, internet users ages 50-64 who said they use a social networking site like MySpace, Facebook or LinkedIn grew 88%" (p. 2). Those numbers translated into half of internet users in the 50-64 age range also being users of online social networks. Furthermore, 86% of internet users age 18-29 also used social networking sites. The challenges of tracking usage rates correspond to challenges in understanding how social networking sites are being used and why users engage in the activities on the sites. Researchers such as Baek, Holton, Harp and Yaschur (2011) have worked to determine why social media users are motivated to post information within Facebook. However, as social networking sites make changes, and users it

becomes increasingly important that more research be done. This exploratory research hopes to begin a stream of research to better describe the communications taking place within online social networks such as Facebook.

Research related to anthropomorphism and technology continues as does research related to anthropomorphism and marketing (Fitzsimmons, Chartrand, & Fitzsimmons, 2008). However, as technology evolves and usage of technology changes it is critical that more investigation be done related to the necessary conditions for anthropomorphism and the resulting behavior changes it produces for individuals and groups.

Organizations have struggled to find the best approach to influencing customers and word-of-mouth (WOM) marketing plays a critical role in organizations attempts to communicate with customers (Keller, 2007; Plummer, 2007). Bickart and Schindler (2001) noted the importance of written online communication because of its potential as an archived source of word-of mouth communication in comparison to face-to-face WOM. Research into electronic word-of-mouth (eWOM) marketing is still relatively new because the context of the internet, online, and virtual communities in general is still new (Hennig-Thurau, Gwinner, Walsh, & Gremier, 2004). Furthermore, existing descriptions of word-of-mouth marketing describe word-of-mouth communication as originating from a person (Kozinets et al., 2010). If organizations must wait for individuals to initiate this powerful form of marketing it presents a problem for modern organizations trying to gain new customers and retain current customers.

Viewed together, the challenges related to online social networks, anthropomorphism and word-of-mouth marketing present a number of research opportunities. If individuals within online social networks do anthropomorphize organizations then businesses might be able to initiate electronic word-of-mouth communication with the expectation that it would be well

received while providing greater understanding of social interactions and marketing opportunities in the process. Although significant evidence of such interactions may be elusive, exploration of aspects of potential future models is possible.

Purpose of Study

The purpose of this exploratory study is to investigate anthropomorphism and word-of-mouth marketing within the context of an online social network. Specifically, the purpose of this study is to determine if Social Response Theory, as described by Reeves and Nass (1996), can be applied to electronic word-of-mouth communication within Facebook. Exploring if organizations can initiate word-of-mouth marketing from within an online social network and take on the role of an individual in the traditional WOM marketing process may add valuable information to the disciplines of human-computer interaction and marketing as well as tactical suggestions to businesses.

To explore these possibilities a number of specific areas will be discussed in the literature review and explored through quantitative and qualitative methods including: anthropomorphism, online social networks, word-of-mouth marketing, consumer decision making, heuristics, group status, loneliness, and interpersonal influence.

CHAPTER 2.   REVIEW OF LITERATURE

The internet has evoked an evolution in communication exchanges to include both human-to-human interactions as well as human-to-computer interactions. Specifically, online social networks such as Facebook involve hundreds of millions of users and provide platforms for new forms of interaction including games, chat, and *Wall Postings*. Overlapping the rise in importance of technology are the instinctual anthropomorphic responses of humans to non-human entities including responding to social cues from computers and other media (i.e. Computers are Social Actors, Social Response Theory). Therefore, online social networks provide an interesting context for research involving groups status, anthropomorphism, and word-of-mouth marketing and much literature exists, from within a variety of disciplines, about each of the topics.

Anthropomorphism

Anthropomorphism is the tendency of humans to assign human characteristics to non-human entities and is part of the human condition (Darwin, 1872/2002). Although the precise extent to which human beings perceive non-human entities as human-like remains unclear, researchers have documented anthropomorphism in a wide range of disciplines ranging from religion, marketing, anthropology, communication and human-computer interaction.

Previous research has determined that certain variables do play a clear role in anthropomorphism. Epley, Waytz, and Cacioppo (2007) noted three primary drivers or cognitive determinants for human beings to anthropomorphize, including: "Elicited Agent Knowledge" (p. 868), "Effectance Motivation" (p. 871), and "Sociality Motivation" (p. 875).

Elicited Agent Knowledge

The concept of elicited human knowledge includes a number of variables blossoming from inductive reasoning related to the idea that human's understanding of themselves and the human condition generate anthropomorphic reactions. That is, humans only know what it is like to be human. Therefore, part of the reason human beings are predisposed to anthropomorphize is because they are incapable of understanding what it would feel like to be something other than human. This is exhibited through a predisposed reaction to stimuli perceived to be similar to humans in form or function. The reaction is neurological in origin and related to "the mirror-neuron mechanism" (Rizzolatti & Craighero, 2004) which allows humans to learn through imitation. Essentially, the same neurons are engaged when a human performs a behavior or sees another perform the behavior. The egocentric bias also seems to play a particularly important role in the extent anthropomorphism manifests and is related to an individuals need for cognition. Epley et al. (2007) suggested that a higher need for cognition would likely lead to lessened reliance on initial automatic anthropomorphic responses and described a connection between anthropomorphism and the elaboration likelihood model (ELM). Cacioppo and Petty (1982) developed the ELM while investigating "differences among individuals in their tendency to engage in and enjoy thinking" (p. 116). In its most basic form, the elaboration likelihood model relates to the likelihood that a person will expend mental energy to determine the correctness of a particular argument based on the arguments merits (Cacioppo, Petty, & Stoltenberg, 1985) or based on issues that are not relevant. In the case of anthropomorphism, the higher the need for cognition is within a person the less likely the individual is to anthropomorphize (Epley et al., 2007).

Effectance Motivation

Epley et al. (2007) describe the second important ingredient of anthropomorphism as human beings having a need to be effective within their surroundings. White (1959) first described effectance motivation as an internal predisposition to develop competence in dealing with the external environment. Additionally, White (1959) seemed to make a connection between effectance motivation and heuristics when he stated: "autonomous capacity to be interested in the environment has great value for the survival of the species" (p. 315). Broadly defined, heuristics are mental shortcuts (Shah & Oppenheimer, 2008) that provide incomplete but incredibly useful information to the decision-maker (Gigerenzer & Gaissmaier, 2011). Simon (1990) suggested an appropriate view of heuristics is as an efficient, but not necessarily optimal, form of decision-making. One form of heuristic processing that seems to mesh within the structure of effectance motivation is the availability heuristic. Tversky and Kahneman (1974) also described the "availability heuristic" (p. 1127) as a mental shortcut individuals may use to determine the probability of an occurrence based on their available knowledge. The research provided the example that individuals may assess the likelihood of a heart attack based on the knowledge an individual has of friends who have had heart attacks. If an individual knows people who have had heart attacks the individual is more likely to predict a high probability of heart attacks in general. Therefore, the availability heuristic fits well into overall inductive reasoning that permeates anthropomorphism.

Social Motivation

Maintaining social connections is critical for human beings and social motivations play an important role in anthropomorphism as noted by Epley et al. (2007). Marcus, Machilek, and Schutz's (2006) study of personality impressions on personal websites found some individuals

are very interested in sharing information about their true selves online. Ramirez, Zhang, McGrew, & Lin. (2007) determined that most people who wish to stay connected online do so thorough mostly observational activities. Regardless of the type of communication individuals are interested in, the context provided by online social networks allows for both social connection and self-disclosure and creation of interconnected groups. The role of groups and group status in relation to anthropomorphism also brings other topics, such as loneliness, credibility and trust, into the discussion. Additionally, within the context of online environments the interactivity between individuals and non-human entities seems to play an important role in the sense of presence (Ahn & Bailenson, 2011) and persuasiveness of a message.

Loneliness can play an important role in anthropomorphism as noted by Waytz, Morewedge, Epley, Monteleone, Gao, and Cacioppo (2010): "when lacking connection to other humans, people construct sources of connection by creating humanlike agents out of nonhumans" (p. 412). Loneliness and anthropomorphism findings have not always been conclusive. McConnell, Brown Shoda, Stayton, & Martin (2011) determined that individuals who were more likely to anthropomorphize a pet were "more depressed…less happy…but they were not significantly more lonely" (p. 1244).

According to Tajfel (1978), Social Identity Theory is the mental self-concept a person has about his/her status in a group and the emotional value the person places on the group membership. These associations can be strong and can permeate into an individual's social behaviors and consumer motivations (Lee, Kim, and Kim, 2011). Wyer (2010) noted that group status can be very involved and that individual group members may incorporate components of the group's image and beliefs into their own self-image. This makes in-group status critical to persuasion because group status can become a heuristic for processing information received

through the group (Mackie, Worth, & Asuncion, (1990). In-group status may serve as even more than a heuristic for accepting or rejecting information. It may also result in selective exposure (Knobloch-Westerwick & Hastall, 2010) in the sense that in-group members may altogether avoid media and messages alternate to the views of the group. In the context of the online social network Facebook several formalized, objective in-group status conditions exist. The most efficient way for individuals to show a favorable opinion of a comment, photo, a celebrity or an organization is to click on the *Like* button and thereby show other users what they like. In-group status can also be fostered by being mutual *Friends* with a person(s) or by literally joining one of the many group organized on Facebook. Less formal in-group status conditions also exist within Facebook such as when individuals have commented on similar ideas (e.g. posting happy birthday messages to a person) but do not know each other. The interconnections between group membership, reputation and trust are important considerations. Mcdonald and Slawson (2002) showed that a known reputation lessens information asymmetrics and vendors with better reputations receive higher prices within online auctions when other variables are held constant.

Based on review of the literature regarding elicited agent knowledge, effectance motivation, social motivations, and anthropomorphism more broadly the following hypotheses are proposed:

Hypothesis 1 (H₁): Social interactivity between organizations and others within online social networks will create a priming effect and elicit social responses from subjects.

Hypothesis 2 (H₂): *Liking* an organization within Facebook will lead to an increase in anthropomorphism of the organization.

Hypothesis 3 (H₃): Subjects who anthropomorphize organizations within online social networks will be more willing to engage in word-of-mouth communication.

Social Response Theory and Computers as Social Actors

While anthropomorphism deals with broad issues of humans assigning human-like characteristics to non-human entities, several theories focus attention on how humans anthropomorphize technology and media. Social Reponses to Computers (David, Lu, Kline, & Cai, 2007), Computers are Social Actors (Besmann & Rios, 2012), and Social Response Theory (Reeves & Nass, 1996) all focuses on human responses to technology. Social Response Theory is based on the premise that humans are inherently social beings and need relatively little prompting to interact in a social way with computers and media, even when another person is not involved.

Literature related to these theories includes debate about whether social responses to technology involve humans knowingly assigning human characteristics to technology or whether such assignments happen automatically or if the answer is some nuanced mixture of mindfulness and mindlessness. Nass and Moon (2000) made the case for Social Response Theory to be a completely automatic, even "mindless behavior" (p. 83) although in earlier work Nass, Steuer, Tauber and Reeder (1993) actually used the term anthropomorphism, as well as the Greek term *ethopoeia*, as part a description of social responses to technology. Lee (2010) explored the "two competing, albeit not incompatible" possibilities for individuals to respond socially to technology and found a mixture conflicting findings. Some aspects of Lee's (2010) studies supported anthropomorphic reactions while other aspects supported mindlessness. Lee concluded:

Such divergent findings, at the very least, suggest that social responses to computers do not necessarily represent automatic reactions to interactive technology wired in (the)

human brain, which await external triggers. Instead, some social responses might occur as a result of rather effortful activation of social scripts. (p. 210)

Although at odds with some of Nass' writings, for purposes of this research, Social Response Theory will be a term used to acknowledge some specific anthropomorphic behaviors even though such behaviors may not always be clearly automatic or mindless. This use of terminology follows Epley, Waytz, Akalis, & Cacioppo (2008) writings about such so called strong or weak versions of anthropomorphism in that "a theory of anthropomorphism does not need to accept one form or reject another" (p. 145).

Nass and Steuer (1993) and Nass, Steuer and Tauber (1994) were some of the early pioneers of the idea that humans engage in social interactions with computers and other media and led the way for Reeves and Nass (1996) to describe the concept of Social Response Theory. Nass et al. (1994) and Reeves and Nass (1996) conducted a series of experiments replicating experiences that are typically considered human-to-human interactions but did so with human-to-computer interactions. For example, Reeves and Nass (1996) conducted an experiment involving praise and criticism. Human interpersonal communication involves giving and receiving of praise and criticism and has been thoroughly studied (Meyer, Bachmann, Biermann, Hempelmann, Ploger, and Spiller, 1979). Reeves and Nass (1996) found the same conclusions from human-to-computer interactions involving praise as have been found in human-to-human interactions. That is, participants enjoyed praise from a computer in a way similar to enjoying praise from another person and perceived their own actions more highly when receiving the praise from a machine as they would from a person.

Experiments involving Social Response Theory have shown that simple technologies can be used to evoke social responses. That is, virtual reality, artificial intelligence, and other such

technologies are not required for humans to interact socially with a computer. Reeves and Nass (1996) noted that "many of our studies generate these responses with rather pathetic representations of real life: simple textual and pictorial material shown on garden-variety technology. The equation still holds, however. Mediated life equals real life." (p. 7). It is important to differentiate Social Response Theory as described by Reeves and Nass (1996) from concepts related to general forms of social response described in psychology and medical literature. There are a number of instances in the literature where the words "social" and "response" are paired together in ways completely unrelated to the human tendency to respond to non-human technology agents in social ways. For example, Stevenson and Repacholi (2003) used the phrase *social response* to describe childhood reactions to particular smells. Lewis and Barton (2006) used the phrase *social response* when describing sexual behaviors influenced by the amygdala in primates. In neither case were the authors referring to Social Response Theory as discussed in this paper. Additionally, it is critical that Social Response Theory be viewed as distinct from uses of the phrase *social response,* which relate to social influence and conformity within the disciplines of psychology and marketing. For example, Nail, Levy and, MacDonald (2000) developed a model of *social response* as it relates to conformity and Nail et al. (2000) is cited by some authors as providing a *Social Response Theory* (Clark, Zboja & Goldsmith, 2007; Clark & Goldsmith, 2005). Analysis of the literature clarifies the direction of such research as being related to conformity and clearly different from Social Response Theory as described by Reeves and Nass (1996).

Detractors of Social Response Theory bring up a number of arguments against the theory (Reeves & Nass, 1996). Some suggest that human reactions to computers are impulsive such as the way a person may yell at a TV screen during a basketball game.

Some authors have noted a belief that a certain level of ignorance is required for a human to respond socially to a computer (Nass, Moon, Fogg, Reeves, and Dryer, 1995). But, even some of those early skeptics of technology-human interaction and automation, such as Zuboff (1998), believed that type of naiveté would exist for only a short time in American society.

Kim & Sundar (2011) suggested that when humans interact with a computer in a social way, they do so with a clear understanding the computer is not a person. Reeves and Nass (1996) provided experimental evidence to suggest that humans did not view computers as proxies for humans, but also did not view the machines as human, and yet continued to respond to them in a social way. Not all media evoke a social response. That is, for media to evoke a social response it needs to have certain qualities, and in effect, mirror human behavior. In other words, humans may ignore computers or other media the same way they ignore other people. For example, within the study of politeness, Reeves and Nass (1996) described several characteristics for media to effectively model Social Response Theory. They determined that media needed to provide an appropriate level of quantity of information. Too much or too little information from a source created frustration by the user. People can learn to adapt to the provided level of information over time. However, the need for humans to adjust to the level of information provided by a computer or other media source seems to be a potential gap within Social Response Theory. When humans communicate with each other they often learn to make adjustments in the quantity of information provided and to be fully effective media would have to learn as well. "Relevance" and "Clarity" (Reeves & Nass, 1996, pp. 30-31) were also investigated in the area of politeness with similar findings to the topic of quality. That is, if technology provides information of little relevance, or if the information is unclear, it may not evoke a social response. It is worth noting that Reeves and Nass (1996) viewed failures of media

in the areas of quantity of information, relevance and clarity as part of social response. In other words, it was argued that a computer could fail to be polite in the same ways humans fail to be polite, and in such instances, the person or the computer might be ignored by humans. Specifically, Reeves and Nass (1996) noted "all of these conclusions lead to negative consequences for media because people will ascribe meaning to failure, whether the entity that fails is a person or a machine" (p. 32).

Social Response Theory was tested in a series of experiments by Reeves and Nass (1996) including studies involving politeness, flattery, team roles, and a variety of other situations and experiences that typically are thought to involve interpersonal communication. In total, thirty-five studies have been conducted. In every case, humans interacted with computers in a way that replicated human-to-human social mannerisms. Moon (2000) determined that humans would engage in self-disclosure behaviors with a computer when the computer prompted the subject in the same manner as would occur within interpersonal communication. Importantly, Moon (2000) determined that the majority of subjects were not overly conscious of the fact that the computer was behaving with human mannerisms. Nass, Fogg, and Moon (1996) found that humans would participate on teams with computers and behave in ways consistent with human-to-human team membership. Nass, Moon, Fogg, Reeves, and Dryer, (1995) determined that humans could even interpret personality cues from computers and respond in social ways. Nass, et al. (1995) placed some subjects in an experiment in which they were put on a team with a computer and then experienced an activity ranking items needed for a desert survival experience. The human subjects responded to dominant and submissive signals in the same manner as sociologists have found humans to act when on teams with other humans. Additionally, subjects displayed a

preference for interacting with computers that projected similar personality inclinations (e.g. dominant / submissive) to themselves.

Human-computer social interactions have even been found to act in accordance with psychological and sociological concept of attribution theory. Moon and Nass (1998) found a significant cross-over interaction related to the level of similarity subjects felt between the subject and the computer and the level of success or failure the subjects attributed to themselves. Subjects were placed in an experimental condition involving social cues creating a sense of similarity to the computer. Subjects in the similarity condition were significantly more likely to attribute part of the success to the computer compared to subjects in a condition in which social cues were provided to suggest the computer was dissimilar to the person. Therefore, Moon and Nass' (1998) findings concur with the attribution research done by Walther and Bazarova (2007) involving human-to-human communication in virtual groups. Through a variety of experiments, including: teamwork, personality interpretation, politeness, flattery, and attribution theory, researchers have determined that humans will interact with computers in social ways and that "media experiences equal human experiences" (Reeves & Nass, 1996, p. 251). Although Nass and Moon (2000) have argued that Social Response Theory differs from anthropomorphism in regards to mindful and mindlessness both constructs serve an important role in the current research.

Group Status

Group status is an important part of almost all social interactions and impacts credibility, persuasion, and trust. Additionally, self-disclosure by group participants and some heuristics are key issues related to group status within online social networks. Of particular importance for this research is impact of group status on anthropomorphic tendencies.

The foundation for the role of group status in anthropomorphism can be found in psychology and social psychology research related to how people assign human characteristics to other humans. Such assignments transcend the "like associates with like" (Goel, Mason & Watts, 2010, p. 611) considered part of the homophily of designated groups. Leyens, Paladino, Rodriguez-Torres, Vaes, Demoulin, Rodriguez-Perez, and Gaunt (2000) determined that humans part of in-groups assign human characteristics to in-groups and out-groups differently. Specifically, in-group members were less willing to assign emotional attributes to out-group members in the same way as in-group members. In essence, out-group status members were assigned "infrahuman" (p. 186) status by in-group members. Such findings are brought closer to the current study through Besmann and Rios (2012) who found that subjects were more likely to anthropomorphize video game characters if the characters were teammates (i.e. in-group status) of the subject than if the video game characters were not on the same team (i.e. out-group status).

In-group and out-group status has been shown to be a key determinant of trust, particularly in situations related to financial interests. Berg, Dickhaut, and McCabe (1995) found subjects trusted in-group individuals more than out-group individuals, even in economic situations when actions related to self-interest would have suggested trusting the out-group. In-group trust is not infallible as not all researchers (Trifiletti & Capozza, 2011) have been able to replicate Berg et al.'s in-group trust findings. Therefore, analysis of previous research related to groups and inclusion of research questions related to group status were important in the current study.

Group Status and Credibility

Discussions of credibility and trust can be a bit tautological because trust is often listed as a requirement of credibility (Ohanian, 1990), while trust is often described as believing another

person is credible (Benedicktus, Brady, Darke, & Vorhees, 2010). Gass and Seiter (2011) describe three primary dimensions of credulity (expertise, trustworthiness, and goodwill) and three secondary dimensions of credibility (extroversion, composure, and sociability). This list is confirmed by other authors such as Belonax, Newell, and Plank (2007) who commented on the importance of expertise in credibility as well as Sirdeshmukh, Singh, and Sabol (2002) who noted that importance of trustworthiness in ongoing relationships. The credibility of an individual or organization is often judged by their position within or outside of a particular group. However, Metzger, Flanagin and Medders (2010) suggested that the credibility of a person or organization may also be judged by its existing connections to the group. In other words, if a person or organization is new to one member of a group but is known to another member of the same group, then the person or organization may be viewed as credible by the first member on the basis of an association heuristic. A study by Aldiri, Hobbs, and Qahwaji, (2008) supports such a proposition because Aldiri et al. (2008) determined that subjects automatically place more trust in a website that includes a photo of a person of the subject's own ethnicity than a website photo of a person who was not of the same ethnicity. In that instance the heuristic of ethnicity served as a direct conduit for trust.

Persuasion within Groups

Groups, by their nature, produce persuasive (e.g. normative) signals to group members. For example, Mackie et al. (1990) noted that individuals validate their views by determining if their thoughts are in line with the other similar people. Individuals look for cues from the group to determine if their actions and behavior are in line with others.

Heider's (1958) balance theory provides a number of important considerations for exploring persuasion and trust within groups. At its most basic tenets, balance theory suggests

that individuals will try to retain a harmony balance in their actions, interactions and within groups. Woodside and Chebat (2001) provided a consumer behavior example of balance theory related to branding by describing how if an individual likes a certain attribute of products and finds a brand of product with that attribute, then the project will produce a sense of balance. Awa and Nwuche (2010) noted that balance theory can be applied to group interactions and in-group persuasion as well. Awa and Nwuche (2010) used the example of two brothers who get along well and how one brother does not like a particular product. However, the other brother has knowledge of the product and shares that knowledge with his sibling, and in doing so, may persuade the brother to change his opinion. Balance theory suggests that the first brother's attitude toward the product may change consciously or unconsciously. Ziegler and Lausen (2005), when writing about social networks, suggested that Heider's balance theory could even be applied to relationships by stating "individuals are more prone to interact with friends of friends than unknown peers" (p. 337).

Group persuasion is not limited to the members of a group receiving a message. The creation of a supportive message can also reinforce the sender's attitude as well. For example, Shimp, Wood, and Smarandescu (2007) noted that "the act of writing testimonials following a brand-usage experience can induce positive perceptions of that experience through a process of reconstructed memory" (p. 454.).

Trust within groups

Some definitions of trust are focused on the types of participants. Flores a0nd Soloman (1998) proposed that trust is inherently social and described trust as exclusive to human interactions. To that end the authors stated that trust is often a function of the character of the individual. Many researchers differ from Flores and Soloman (1998) and contend, as Urban,

Sultan and Qualls (2000) do, that trust is possible between people and organizations (Zaheer, McEvily, Perrone, 1998). Still others, such as Gulati and Sytch (2008) have suggested that organizations are able to collectively trust other organizations. Definitions of trust that allow for trust between humans and between human and organizations are particularly important within the context of this paper. Individuals within groups are certainly impacted by the level of trust that is possible and, as will be discussed later in this paper, the ability of individuals within a group to essentially share or spread their trust of an organization heuristically is an important component of many online interactions.

Self-disclosure within groups

Because online social networks have not existed in their current form for very long the effects of self-disclosure within an online social network are not fully understood. Even so, the motivation of individual group members to participate in self-disclosure within their online social networking groups, such as Facebook, is an important concern related to in-group status and trust. Ledbetter, Mazer, DeGroot, Meyer, Mao, and Swafford (2011) noted that social network sites are inherently about self-disclosure, and also determined that self-disclosure could play a role in determining relational closeness. This makes self-disclosure an important topic of consideration within in-group status in relation to online interactions. Although self-disclosure can manifest around a wide range of topics the role of consumer is most relevant in this paper. If enough individuals in a group self-disclose about a particular product, or brand, it can provide consensus information (Benedicktus, et al., 2010) to others. This can be particularly true when in-group behavior reaches a level of *self-anchoring* (Otten & Wentura, 2001) in which individuals intertwine their own self-image with that of the group. Although the connection

seems to be indirect, high levels of self-disclosure seem to contribute to in-group status and the acceptance of heuristically determined trust as mentioned early in this paper.

Group status and the representativeness heuristic

In the current study, group status is expected to play an important role in how human beings process information received through in-group or out-group conditions. As noted previously, the volume of messages presented within online social continues to rise for a number of reasons including a propensity to self-disclose. The result is a high number of messages bombarding individuals within similar groups. Previous research into information process seems to suggest a possible connection between the context of in-group status and the volume of messages related to specific topics. Tversky and Kahneman (1974) completed research demonstrating how individuals would use mathematical probabilities to make decisions when given no other contextual information but the same individuals would actually ignore the same probabilities when provided with useless contextual information. This became known as the "representativeness heuristic" (p. 1124). If a consumer has already recognized a need and begins searching for information about possible choices to meet the need and encounters a limited number of brands with great frequency the consumer might assume those brands are also the best. Grunert (1996) suggested that "advertising to which a recipient is exposed will be automatically processed with regard to personal relevance, and the higher the personal relevance, the higher the probability of conscious attention" (p. 94). In simple terms, this suggests that customers who experience a message about a product repeatedly may be more likely to recognize needs related the product. Given the interconnectedness of users of Facebook such repetitive exposure occurs often. This fits well with heuristic theory and also integrates nicely with findings by Yoo (2008) where customers who do experience unconscious consideration of an

internet based advertisement are more likely to consider the brand represented by the advertisement. It is not known if the representativeness heuristic may impact anthropomorphism of a business by individuals but the prior research does seem suggest it will be an important consideration for word-of-mouth communication within an online social network.

Online Social Networks

The broad category of online social media includes many different technologies such as: Twitter, YouTube, LinkedIn, Facebook and more. Tangential technologies include personal web pages, blogs, chat rooms, online discussion forums. The different categories of social media, such as social networking, include sub-categories. For example, the capabilities and corresponding uses of LinkedIn are different from Facebook although both fit within the overall category of social networking sites. LinkedIn focuses on business relationships and readily provides users information on who has viewed a personal *Profile* whereas Facebook does not. Facebook allows for a great deal of interaction between users that is visible by other users. The focus of the current study is on anthropomorphism and word-of-mouth marketing and the largest social networking site which includes communication between individuals and organizations in an essentially open forum is Facebook.

The concept of a network as a group of individuals involved in communication (Shockley-Zalabak, 2012) existed before organizations such as Facebook or MySpace. But it is those types of organizations that have popularized the concept of the online social network as an internet based forum for individuals to use their real identities for communication and for the creation of connections between individuals and groups. According to Smith (2011) approximately 60% of social networking users participate in online social networking to remain

in contact with family and current friends. Additional time spent using social networking sites may involve the playing of games, reading quasi news information such as anecdotal weather reports from friends, browsing of photos posted by others and even communicating with companies. Patterson (2012) determined that half of online social networking users have communicated with and/or made a connection to a company within an online social network.

Interactions within online social networks and the group status of the individuals involved can play an important role in marketing communications. Naylor, Lamberton & West (2012), conducted research using Facebook as one of the research contexts, determined that group status can have several important effects on subject's thoughts about a brand. For example, in-group individuals experienced stronger affinity for a brand when in-group individuals were affiliated with the brand. However, Naylor et al. (2012) also found that ambiguous group categorization produced a similar effect. Additionally, the research determined that if an individual views a brand in an online social network and the brand's followers seem to be out-group or dissimilar individuals it can have a negative effect on the individual's perceptions of the brand.

Zeng, Huang and Dou (2009), conducting research within a Chinese online social network determined that social identity in terms of groups and group intentions played an important role in subject's likelihood of responding positively to advertising presented to the group. The study found significant support for the hypothesis of social identity relating positively to an advertisements importance for the group in an online social network.

Human-to-human interaction within online social networks

Human communication has been in a state of evolution since language first developed (Fay, Garrod, Roberts, Swoboda, 2010) and De Bruyn and Lilien (2008) noted numerous ways

the internet has expanded "consumer interconnections" (p. 151). Since the emergence of online

social networks such as Facebook and MySpace in 2004 and 2003, respectively, human-to-

human communication via social networks has increased dramatically. Over half of Facebook

users log into the site on any particular day and cumulatively spend over 700 billion minutes per

month using the site. Research concerning online social networks conducted prior to 2004

focused on online environments typically involved anonymous users. Research into social

networks such as Facebook is expanding quickly and the role of interpersonal communication

within such networks is an important topic for consideration.

Human-to-computer interaction within online social networks

Evolution of the internet and with how web pages are presented has culminated with

online social networks taking on greater socially responsive roles than previous online

technologies. Wang, Baker, Wagner and Wakefield (2007) described how some websites allow

humans to more easily perceive the technology as social because the websites provide social cues

such as interactivity and social roles. Social roles, in particular, provide for the human-computer

communication to replicate the human-to-human communication. Wang et al. (2007) found that

if a computer takes on the role of tour guide participants were more likely to be willing to use a

website and recommend the website to others. Holzwarth, Janiszewski, & Neumann (2006) used

the term reciprocity for actions similar to the interactivity described by Wang et al. (2007).

Holzwarth et al. (2006) determined that an avatar, in that case, a type of caricature of a person,

could increase the social cues provided. Although a physical representation of a person is not

necessary for anthropomorphism or Social Response Theory (Reeves & Nass, 1996), additional

layers of interactivity and human persona certainly do seem to improve social interaction. Reeves

and Nass (1996) suggested that humans are hardwired to approach situations with an expectation of social response. That is, throughout human evolution "the human brain evolved in a world in which *only* humans exhibited rich social behaviors, and a world in which *all* perceived objects were real objects. Anything that *seemed* to be a real person or place *was* real" (p. 12). This projection of human characteristics happens completely naturally even though individuals typically deny it is taking place. Reeves and Nass (1996) used the technique of "multidimensional scaling" (p. 79) to show that humans assign personality traits (i.e. dominance/submissive & friendly/unfriendly) to media images in ways almost identical to the assignment of personality traits to other people.

Online social network users interact with computers in a variety of ways. Users may download games or other applications and may interact with corporate sites within the social network to gain information or state an opinion. According to its own statistics, Facebook's users download twenty million applications each day. Nazir, Raza, and Chuah (2008) demonstrated the success of such applications by creating a social game for research purposes and in the process attracted over 3 million of users. That fact alludes to the volume of interaction between individuals and computers within online social networks.

Wakefield, Baker, Wakefield, and Wang (2011) showed subjects responded favorably to social cues when provided "an interactive shopping guide" (p. 128). If Wakefield et al.'s (2011) and Brown et al.'s (2007) findings are considered together it becomes possible to see the possible future of social networking sites. Specifically, it seems possible that interactive shopping guides presenting personality traits could take on the friendship role in an application such as Wet Seal's interactive shopping guide (Murphy, 2010). Although humans understand computers

status as machines they intuitively respond to social cues provided by computers, related media and even businesses.

Brown et al. (2007) noted some users of social network sites may have begun to see web sites as individuals with social identities. For example, some web site users acknowledged feeling a sense of obligation to participate in a site similar to the way individuals feel an obligation to communicate with certain people in their lives. Brown et al. (2007) described "evidence of the concept of a consumer-Web site relationship" (p. 13) involving both functional and emotional affiliations. Although Brown et al.'s (2007) research mentions online social networks their actual case study analysis focused on website forums such as www.buffy-boards.com (related to the TV series Buffy the Vampire Slayer) instead of exploring interactions within online social networks such as Facebook. Nonetheless, Brown et al.'s (2007) presented an important foundation for considering word-of-mouth communication within an online social network such as the importance of credibility and homophily. In particular, the connections between homophily as "love of the same" or "birds of a feather flock together" (Wimmer & Lewis, 2010, p. 583) was a consideration in the current research in terms of the possibility that in-group status would increase the likelihood of anthropomorphism.

Based on review of the literature the following hypotheses are proposed:

Hypothesis 4 (H₄): Increase in positive social communication within a group that exists in an online social network will be lead to increased trust of the organization by in-group individuals.

Hypothesis 5 (H₅): Increase in the level of social connectedness between an individual and an organization within an online social network will cause an increase in the willingness to engage in word-of-mouth communication.

The history of Facebook

In February of 2004 Facebook began as an online space for Harvard students to interact. Within a year the site expanded to allow college students at other schools, high school students and employees of some technology firms and had approximately 1 million users. Facebook generates revenue through advertising and does not charge a membership fee. In 2005 the number of users reached 6 million. During 2006 the site was opened to everyone over the age of 13 and by the end of the year in garnered twelve million users. The rise in membership rose steadily to 58 million users in 2007 and then 145 million in December of 2008. The *Like* button became part of Facebook in February of 2009 and allowed users to provide a visible personal vote in favor of ideas, organizations and comments they care about. By December 2009 Facebook reached 360 million users and then 608 million users by December 2010. In December, 2011 there were 845 million users. As of October, 2012 Facebook reported over 1 billion active users. Data from Facebook's "Timeline" was used to create the following chart depicting the growth in membership. In 2012 Facebook added the ability of users to send each other gifts through the site.

Users Facebook in millions

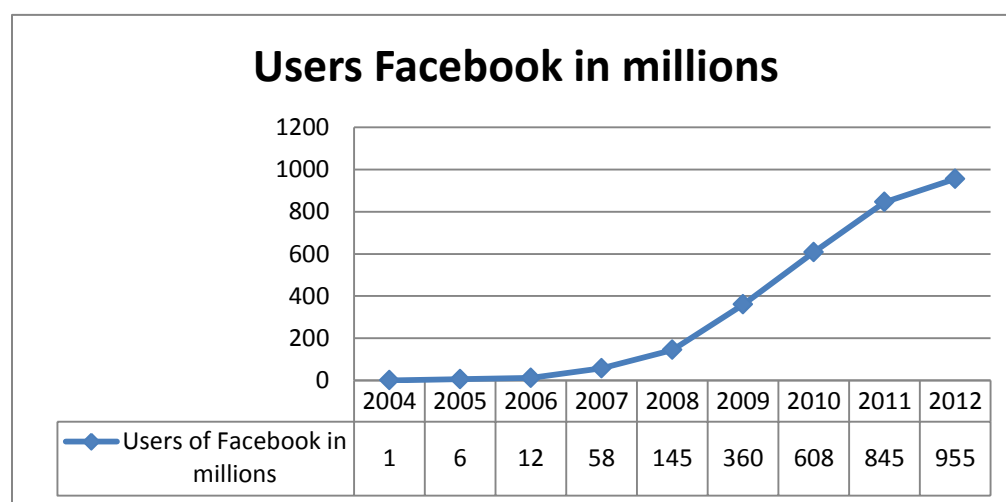|	2004	2005	2006	2007	2008	2009	2010	2011	2012
Users of Facebook in millions	1	6	12	58	145	360	608	845	955

Figure 2_Facebook user expansion 2004-2012

Trust in online environments

The fact that trust is typically more difficult to establish in fully online environments, in part because of a lack of prior interactions, is well documented (Bhattacherjee, 2002). Grabner-Krauter and Kaluscha (2003) described the "transaction specific uncertainty" (p. 786) that exists in many online interactions because of an imbalance of information (i.e. asymmetry) between actors which may be related to a lack of social cues. Additionally, Wang, Beatty and, Foxx (2004) were not able to find support for a number of aspects of a cue-based trust system within small online retail sites. For example, subjects did not respond in a significant way to seals of approval or detailed privacy disclosures. Fuller, Serva and Benamati (2007) described how this lower starting point of trust in online environments leads to consumers seeking out additional information from trusted sources such as friends or "reputation systems" (p. 676) such BizRate.com. This lower starting point for trust also leads to the importance of word-of-mouth communication as a means to reduce perceived risk in online interactions with firms (Kim, Ferrin, & Rao, 2008). Pavlou (2003) detailed how the rise of electronic commerce has led to development of technology tools to try to help consumers gain a sense of trust of online systems. Pavlou's (2003) comments seem predictive given the widespread use of online social networking tools and in particular the *Like* button with Facebook. In this way, technology tools serve as a conduit for in-group members to provide trusted information about ideas and products. This idea is supported by Jones (1999) who found that "socializing with family and friends emerged as the highest reported factor of entertaining shopping experiences" (p. 132). During research done before online social networks had developed into their current form, Walther (1995) conducted research of computer-mediated communication and showed trust as reduced in comparison to face-to-face interactions. But that research involved interactions between individuals who did not

know each other in a face-to-face context. Over a decade later, Walther, Van Der Heide, Kim, Westerman, Tong (2008) noted that the inter-connectedness of individuals within online social networks makes it different from other web based contexts. Every Facebook user has a *Wall* space upon which the user or the user's Facebook *Friends* can post messages. However, when a posting is written on the individual's *Wall*, the *Friends* of the individual can see it as well. Additionally, depending on the individual's chosen privacy settings the *Wall* posting might be visible to all Facebook members. Walther, et al. (2008) determined that Facebook users are not only judged by what they post on their own *Wall*. Individuals are also evaluated based on who posts to their *Wall* and what is said when they post. For example, Walther, et al. (2008) found that if attractive individuals posted comments to a user's *Wall*, the user was rated as more attractive. More importantly, Walther et al. (2008) found that when positive statements were posted on a user's *Wall* the user was viewed as more competent (i.e. credible) by viewers of the posting. This is an important finding related to the question of in-group trust in online social networks because it differentiates online social networks from websites where essentially anonymous users interact and shows the effect of a system where the real names and photos of individuals are visible and so are the individuals they consider to be friends.

Loneliness and Online Social Networks

As the use of online social networks continues to rise rapidly, researchers attempt to determine how use of the network impacts individuals and groups. Sheldon, Abad, and Hinsch (2011) found a complicated relationship exists between most individuals thoughts of self and use of online social networks. Although Facebook use was found to "satisfy people's positive relatedness needs" (p. 773) but that it didn't decrease disconnectedness. In lay terms, the findings suggested that Facebook is a more a coping device for loneliness not an ultimate solution.

Sheldon et al.'s (2011) findings do show one reason individuals may use online social networking sites at levels considered to be addictive is because it helps alleviate, at least temporarily, a sense of loneliness.

Based on a review of the literature the following hypothesis is proposed:

Hypothesis 6 (H₆): Subjects scoring higher on the adjusted Hughes et al. (2004) loneliness index will be more prone to anthropomorphize organizations within online social networks.

Word-of-Mouth Communication

The essential components of word-of-mouth communication are as old as language but the modern definition is typically understood as involving human-to-human marketing-related communications related to brands, products or companies. Bearden, Netemeyer, & Teel (1989) noted that interpersonal influence plays an important role in an individual's behavior. The way influence is exerted takes several forms and normative and informational social influences are hallmarks of interpersonal communication between humans (Deutsch & Gerrad, 1955). Normative influences relate to peer-sanctioned beliefs or behaviors, whereas informational social influence is viewed as the willingness to "accept information obtained from another as evidence about reality" (p. 629). Most people can provide influence at one time or another. However, some individuals wield extensive informal social influence and are interested in knowledge related to goods and services (Feick & Price, 1987). Prior to the expansion of internet technologies these individuals were typically restricted to word-of-mouth communication in face-to-face settings. Laughlin and MacDonald (2010) noted that the internet greatly expanded the reach of those wishing to engage in word-of-mouth communication. By 2005 such individuals could be found exerting influence on internet forums and product review websites although it was often under alias or screen-name. Laughlin and MacDonald (2010) also noted the

existence of online social networking sites such as Facebook but did not directly explore word-of-mouth communication on the site. Product related word-of-mouth communication related to online books sales has been researched and may illustrate the future of similar communication in online social networks. Chevalier and Mayzlin (2006) found that reviews of books were generally positive. Additionally, there was "some evidence that an incremental negative review is more powerful in decreasing book sales than an incremental positive review is in increasing sales" (p. 346).

Katz and Lazarsfeld (1955) noted the critical importance of word-of-mouth communications play in everyday consumerism and electronic word-of-mouth (eWOM) evolved with the internet. By 1999, researchers had determined that "57% of people visiting a new web site did so based on a personal recommendation" (Godes & Mayzlin, 2004, p. 545). Researchers have found that word-of-mouth communication continues to evolve and that online or electronic word-of-mouth communication exists in a variety of situations including online communities (Kozinets, de Valck, Wojnicki, Wilner, 2010). There is also research evidence showing the existence and impact of word-of-mouth communication within online social networks. Trusov, Bucklin, Pauwels (2009) determined that word-of-mouth communications within a social network "have a strong impact on new customer acquisition" (p. 98). However, the individuals who exert the most influence on others (i.e. market mavens) within online social networks may be more difficult to identify than initially expected (Trusov, Bodapati, Bucklin, 2010). These findings may suggest that a greater number of individuals are exerting influence but are individually exerting a lesser degree of influence than the traditional marketing maven.

Electronic word-of-mouth communication in Facebook

A number of case study type analyses of interpersonal interactions within Facebook show the importance of understanding how humans currently interact with each other within the medium. Some of the most basic examples involves users sharing their favorite books or favorite movies with their friends (Pempek, Yermolayeva, and Calvert, 2009) as well as communicating positive word-of-mouth communication about a favorite café (Dholakia & Durham, 2010). A much more sophisticated type of interaction has been fostered by the teen clothing retailer Wet Seal. Wet Seal has deployed a Facebook application called 'Shop with friends' which allows Facebook friends to view merchandise online together while chatting and highlighting the clothing they like. Murphy (2010) noted that Wet Seal customers who use the 'Shop with Friends' feature are 2.5 times more likely to make a purchase. Business related interpersonal communication within Facebook is not limited to teenagers. Labor union leaders in Canada have used Facebook to keep in close contact with members in order to support organizing activities (Bryson, Gomez, Willman, 2010). Book authors have benefitted from Facebook *Friends* sharing their thoughts in personal status updates (Pekkanen, 2010).

Another common way individuals interact within online social networks is through specialized groups. Within Facebook, a specialized type of destination called a 'Fan Page' can be created. Fan pages can be created in one of six different categories related to: a business, an organization, products or brands, artists or public figures, entertainment, or a social cause. Facebook users can choose to visit fan pages and view content, post original comments or post responses to other users. Facebook users may also chose to connect their Facebook *Profiles* to the particular fan pages that interest them by clicking on the *Like* button on the fan page. In doing so, they become followers or fans of that fan page and receive information posted on the

page. Barker (2008) described how Sun Microsystems created a fan page and used it update individuals on Sun products and events. It is worth noting that at the time of Barker's (2008) article the Sun Microsystems fan page had "500-plus" (p. 12) followers but at the time of this writing in April 2011 the Sun fan page had 39,912 people who had chosen to *like* it.

The Elaboration Likelihood model and Word-of-Mouth Communication

According to Cacioppo, Petty, Kao, and Rodriguez (1986) the elaboration likelihood model is "based on the notion that people are motivated to hold correct attitudes but have neither the resources to process vigilantly every persuasive argument nor the luxury—or apparently the inclination—of being able to ignore them all" (p. 1032). The ELM view expands some previous views of persuasion which typically focused on either the message or on variables peripheral to the message (Cialdini & Cacioppo, 1981). Cacioppo and Petty (1982) determined that individuals with a low need for cognition are more likely to look past the content of a message and to the message source whereas individuals with a high need for cognition focused more on the message. Cacioppo, Petty, & Stoltenberg (1985) described the elaboration likelihood model as information processing involving two distinct routes on a continuum; the "central and peripheral routes to persuasion" (p. 229). The central route in the ELM is the path involving high likelihood of elaboration and is taken when a subject is motivated and capable of thinking about an issue. The peripheral route represents a low likelihood of elaboration and involves subjects being influenced by considerations tangential to the primary topic. According to Cialdini, Petty and Cacioppo (1981) the central processing route represent the opportunity for long-term persuasion to occur whereas the peripheral processing is less likely to produce lasting persuasion unless it is supported by additional support.

According to Park and Kim (2008) the elaboration likelihood model can be a useful model when marketing products via the internet. Park and Kim (2008) showed that different types of electronic word-of-mouth marketing (eWOM) would be effective with different customers based on whether the customers would perceive the information through the central or peripheral route. For example, Park and Kim (2008) found that customers with expert knowledge decoded eWOM about a product's features centrally whereas customers with lower levels of expertise decoded "benefits-centric" (p. 407) eWOM centrally.

Heuristics and Word-of-Mouth Marketing

Chaiken (1980) noted that conceptual approaches to persuasion have typically involved either detailed processing of information (i.e. systematic information processing) requiring significant cognitive work on the part of subjects or heuristic information processing models in which subjects "exert comparatively little effort in judging message validity" (p. 752). A useful example of how heuristic processing is part of consumer decision making was presented by Hoyer (1984) during research about the impact of brand awareness on purchasing decision making. Hoyer (1984) found that 90% of subjects provided "a simple, one-statement reason" (p. 827) for purchasing choices which reinforced the premise that a heuristic process was being used.

The availability heuristic is also important to online communications and word-of-mouth marketing. One of the most obvious ways the availability heuristic could exist within an online marketing environment is through repeated exposures. For example, as of October, the Nike Football (i.e. soccer) page within Facebook had over 14.7 million people who receive updates from the page. Nike posts videos of soccer players wearing Nike equipment and the videos regularly receive thousands of comments. Promotion such as this seems to be a clear way for

online social networks to keep customers constantly informed about the availability of their products.

Another heuristic that seems likely to impact word-of-mouth communication within online social networks is the affect heuristic. Finucane, Alhakami, Slovic, and Johnson (2000) and Slovic, Finucane, Peters, & Macgregor (2002) expanded on previous work related to various forms of heuristics to recognize affect as a tool for decision making. Previous research by Zajonc (1980) suggested that affect works precognitively and guides overall decision making because individuals do not simply see objects or engage in experiences. Individuals attach affective notations because "we do not just see a 'house': we see 'a handsome house,' 'an ugly house,' or a 'pretentious house' (p. 154). Finucan et al.'s (2000) and Zajonc's (1980) work can be viewed as an important variable related to word-of-mouth marketing and group status because it suggests an affective heuristic may trump other decision making devices. That is, individuals may, with nearly intuitive level responses, chose to acknowledge information from in-group members simply based on feelings associated with group status.

As described by the research above, heuristics play an important part in word-of-mouth marketing and seem related to group status as well. The different types of heuristic mental short-cuts mentioned above present another possible way in-group status may impact word-of-mouth communication. As Hoyer (1984) noted, customers may make purchase decisions solely on the recommendation of another person.

Trust and word-of-mouth communication

Trust plays an important role in the persuasiveness of a message (Feng & MacGeorge, 2010) along with credibility (Gass & Seiter, 2011). Furthermore, in-group status and the communication within groups are also important components of positive interactions. As a

whole, these ideas represent topics that must be considered within online communication in a social network.

Formal definitions of trust depend on many variables such as the discipline of the author defining trust and the particular context the author uses to examine trust (Wang & Emurian, 2005). Some definitions are based on the participants involved, whereas others focus on the types of interactions or the context (e.g. commerce) or the components of the interactions (e.g. risk, credibility). Some definitions of trust, such as the definition presented by Deutsch (1958), require that some type of risk be involved and that the risk be related to something of value. Deutsch (1958) claimed his definition of trust to be one of the earliest, research based, definitions of trust within the realm of social psychology:

> An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behavior which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed (p. 266)

Other researchers, such as Mayer, Davis, & Schoorman, (1995) noted that risk taking is not directly required but that the acceptance of the possibility of risk taking is. In this way, Mayer et al. (1995) noted that Deutsch's (1958) definition is often amended to make it clear that some level of vulnerability exists for at least one of the parties involved for trust to exist.

Kee and Knox (1970) acknowledged Deutsch's (1958) definition of trust but placed it in the category of an operational definition and suggested he is deriving trust from observable behaviors that could also be explained as simply cooperation. Kee and Knox (1970) suggested that in addition to observable behaviors trust also involves a subjective state. The subjective state is the internal mental state of trust which must exist before a person will exhibit external trust

behaviors. The distinction made between mental and behavior trust can be witnessed in later models of trust such as McKnight, Choudhury, and Kacmar's (2002) research into trust in e-commerce situations. Additionally, as will be discussed later in this paper, a comparison of different definitions of trust can produce a circular form of reasoning. For example, Ratnasingam (2008) mentioned goodwill as an important component of trust and Wang and Emurian (2003) suggested credibility is a part of trust whereas Gass & Seiter (2011) listed goodwill and trust as important components of credibility. Overlapping uses of broad terms and use of terminology in slightly different ways makes it difficult to create a single unified definition of trust. Although no single unifying definition of trust exists, a list of required conditions of trust that has been developed from within the human-computer interaction discipline. Corritore, Kracher and Wiedenbeck (2002) developed a list of conditions for online trust that incorporates most aspects of the wide range of existing trust definitions. The Corritore et al. (2002) list includes: "risk, vulnerability, expectation, confidence and exploitation" (p. 741). Each of the topics has been directly mentioned here already or eluded to through existing definitions but Corritore et al.'s (2002) ideas will serve as a unifying foundation for the remainder of this paper.

An understanding of the potential limits to the influence of trust is important as it infers the necessity of additional considerations to make economic relationships work. According to Akerlof (1970), in economic situations the purchaser must contend with risk in two categories: transaction risks concerning the seller providing accurate and correct information and information asymmetry related to the good or service being considered. McKnight et al. (2002) studied trust within electronic commerce and examined trust in a way that seemed to build upon Kee and Knox (1970). Specifically, Mcknight et al. (2002) were able to show that although some customers developed a sense of belief about the trustworthiness of certain e-commerce vendors

those same customers were not completely willing to engage in fully trusting behaviors (e.g. providing personal data). This seemed to confirm the notion that trust has cognitive and behavioral dimensions and that a trusting belief is necessary, but not sufficient, for behavior trust actions such as providing a credit card number over a website.

Some of the explorations of trust in the internet and commercial transactions did not take into account the emergence of social networking and only examined trust online between individuals unknown to each other (Gefen, 2002). Online social networks provide personal connections and quick and easy connectivity to others that may allow users to reduce information asymmetry. For example, Park, Kee, and Valenzuela (2009) found that college students joined specific Facebook groups partly out of pressure to retain social status to look cool but also to have the most current information about their environment (i.e. their campus). As individuals use Facebook to stay connected and improve their status, they engage in word-of-mouth communication. Bearden, Netemeyer, and Teel (1989) noted the importance of such interpersonal communication as a tool for enhancing self-image through purchasing of particular products or brands, as well as information seeking and communication about the products and brands. Furthermore, Herr, Kardes, and Kim (1991) determined that word-of-mouth communications had a stronger impact on receivers brand perceptions than did print media detailing similar information. This leads to the importance of group relationships, group status, and the persuasive influence of groups on the individuals within the group. For example, Andrews and Benzing (2007) described risk as more pronounced in many online interactions because transaction risk and information asymmetry are generally increased when seller is not well known to the buyer. The potential for online firms to reduce risk and increase trust may

involve a reliance on the power of groups and in particular groups that organization within social networking communities.

Groups, credibility, and trust play an important role in the communication and decisions of individuals. As people interact within groups, they generate persuasive communication that is an important consideration for all firms.

Based on a review of the literature the following hypotheses are proposed:

Hypothesis 7 (H$_7$): Subjects scoring higher on the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence will be more prone to anthropomorphize organizations within online social networks.

Hypothesis 8 (H$_8$): A higher need for behavior cues in social situations will be associated with an increasing level of anthropomorphism of organizations within online social networks.

Hypothesis 9 (H$_9$): The level of trust subjects have for companies *Liked* on Facebook prior to the study will correlate to the level the subject anthropomorphizes the company in the current study.

Summary of Literature Review and relevance to Hypotheses

A review of existing literature related to anthropomorphism influenced the hypotheses proposed in this work in a number of ways. The social motivation aspects of anthropomorphism as described by Epley et al. (2007) was a primary driver of the hypothesis that social interactivity would elicit social responses *(*i.e. *H$_1$)*. Furthermore, the concept of elicited agent knowledge which suggests that humans only know what it is like to be human was instrumental in the proposal that individuals *Liking* an organization within Facebook would be more likely to anthropomorphize the organization *(*i.e. *H$_2$)*. Also, because of the literature review related to expectance motivation it was predicted that participants engaged in normal activities within an

online social network who perceived organizations as social would engage in social activities typical for social interactions within that group *(i.e. H₃)*.

Previously published literature related to group status influenced the inclusion of a number of hypotheses. Group status and trust literature lead to the inclusion of the hypothesis that an increase in positive social communication within a group in an online social network would lead to increased trust of organizations associated with the group *(i.e. H₄)*. Additionally, the literature review of group status and trust included work Zaheer et al. (1998) showing individuals can trust organizations. Such work, along with other previous literature related to group status lead to *(H₅)* which suggested that increase in the level of social connectedness between an individual and an organization within an online social network would cause an increase in the willingness to engage in word-of-mouth communication.

Consideration of previous research related to loneliness, as well as literature related to anthropomorphism and loneliness, influenced the proposed *(H₆)* which suggested that subjects with a self-reported higher level of loneliness would be more prone to anthropomorphize firms within Facebook.

Previous literature related to social networks, group status and anthropomorphism lead to the expectation that subjects who look to others for guidance would be more prone to anthropomorphize organizations. The literature overall, and in particular Bearden et al. (1989) suggested higher levels of interpersonal influence would lead to a greater likelihood subjects would anthropomorphize (i.e. *H₇)*. Similarly, literature regarding the need for behavior cues in social situations combined with the previously mentioned research related to social motivations, expectance motivation and elicited agent knowledge (Epley et al., 2007) were integral to the proposal of *(H₈)*.

Finally, *Hypothesis 9 (H_9)* was proposed based on previously published works involving research of trust between individuals, trust between organizations, trust within online social networks and trust within in-groups / out-groups. The literature seemed to support the hypothesis that the level of trust subjects have for a firm *Liked* on Facebook would correlate to the level the subject anthropomorphizes the company.

A review of the literature related to anthropomorphism and word-of-mouth marketing within online social networks reveals a need for research related to a number of hypotheses. The possible relevance of trust, loneliness, interpersonal influence, behavioral cues and group status will all be considered in this research with the hope of guiding future research related to the potential for organizations to be the initiators of electronic word-of-mouth communication within online social networks.

CHAPTER 3. METHODS AND PROCEDURES

A mixed methods approach was used including two exploratory surveys (Study 1), an experimental study (Study 2 (Forced *Like*)) involving a survey, another experiment (Study 3) involving a survey very similar to Study 2 (Forced *Like*) but involving a larger sample from a different population and an unobtrusive ethnographic analysis (Study 4).

The exploratory surveys involved use of descriptive statistics such as the mean and median. The experiments included use of a 2x2 between subjects design with random assignment of subjects to conditions. Means and Standard Deviation were included for all relevant data. Statistical analysis of potential cause and effect relationships were explored using analysis of variance (ANOVA) while Spearman's ρ correlation was used to evaluate potential correlational relationships between the variables.

Post hoc work included analysis of pairwise combinations through LS Means Differences Student's t. Additionally, post hoc work involving Bonferroni correction (Curtain & Schulz, 1998) was considered for some results and is explained at the end of the Results section.

Study 1: Overview of Exploratory Surveys

Exploratory surveys were conducted at the outset of the project for several reasons. First, an initial survey was distributed to help determine the level and types of use of social media by the prospective sample population. For example, it was initially unclear whether individuals in the prospective sample population interacted with firms within online social networks and if so, to what extent. The first survey in Study 1 was also intended to help identify potential follow up questions for the second survey related to hobbies and interests of individuals in the prospective sample population.

A second exploratory survey was distributed to attempt to determine how important brands were to the prospective sample population. Specifically, the second exploratory survey was intended to serve as a guide to the development of the experimental studies by providing insight into which product categories would be least impacted by brands in the sample populations. Determining lower brand impact categories was viewed as a necessary step in creating appropriate experimental design in Study 2 (Forced *Like*) and Study 3 because plans for experiments in Study 2 (Forced *Like*) and Study 3 called for participants to with Facebook pages for fictional businesses and the goal was to select product categories in which brand choices played as little a role as possible in perception of the product category. Participants were asked how important product brand is for fifteen different product categories relating to a variety of interests, and consumer activities.

The questions asked of participants in the second survey within Study 1 were intended to guide the creation of the experimental design and questions in Study 2 (Forced *Like*). For example, questions were asked related to the self-reported level of importance brand plays in the purchasing of certain products. The individual ranking results of different brand categories was not of importance in Study 1, only the comparison of the fifteen different categories of items so that one could be chosen for the experimental studies to follow.

Two exploratory surveys were administered as part of Study 1. The first survey was administered in the first half of spring semester in 2011 with a goal of determining if the target population included Facebook users who interacted with companies. A second exploratory survey was administered in the third week of fall semester 2012 to determine conditions for independent variables for the experiments to be done in Study 2 (Forced *Like*) and Study 3.

Study 1: Participants

Participants in the first exploratory survey were students in an undergraduate business course at a large Midwestern university. Students were offered extra credit within their academic coursework for participation. A total of 136 individuals participated with 57 self-reporting as female.

Participants in the second survey included 18 business students at a small comprehensive community and technical college in southern Minnesota. Ten of the participants were female. Participation in the second exploratory survey was completely voluntary with no compensation provided.

Study 1: Informed Consent

Informed consent was obtained prior to administration of the survey questions in both exploratory surveys.

Study 1: Design of Surveys

The first exploratory survey (APPENDIX 1) included questions related to participant's typical social networking usage such as: social networks used and the number of *Friends* on networks such as Facebook. Additionally, the first survey explored the ways the participants used Facebook to interact with companies. For example, participants were asked if they clicked on advertisements within social networking sites. The last question in the first survey asked participants if they ever purchased a product based on a recommendation from a friend within an online social network. It was expected that the results of these questions could provide a rationale for continuation of the experimental portion of the study.

The second exploratory survey, as shown in APPENDIX 2, was primarily focused on determining the best possible independent variable conditions for the experiments. For example,

prior to the second exploratory survey it was unknown whether a Facebook user considers 5 supportive comments (i.e. *Likes*) to be a high or low level of support for a posting. Therefore, the second exploratory study served as a manipulation check to ensure that construct validity of the levels of conditions chosen for the experimental portion of the project. The second exploratory survey included four questions. The first question utilized a 7 point Likert-type scale ranging from extremely important to not at all important and listed fifteen product categories and asked participants to "rate how important a particular brand is to you when considering purchasing." The question was asked as a means for determining the product categories in which brand would play a lesser role when considering a purchase. This was important because the experiments planned for Study 2 (Forced *Like*) and Study 3 involved presentation of fictional firm Facebook pages. Creating a fictional firm in a product category less impacted by brand was viewed as a means to reducing confounds. It was expected that product categories such as cars/trucks would be greatly influenced by brand preferences and would not be a good category for the fictional firms. It was expected that product categories such as movie theaters and vacations would less impacted by brand considerations and therefore would produce fewer confounds if used as the product category for the fictional firm in the experiments in Study 2 (Forced *Like*) and Study 3.

Study 2 (Forced *Like*): Experiment Overview

During early fall of 2012 an experiment was conducted to examine potential relationships and correlations relevant to the goal of understanding anthropomorphism and word-of-mouth communication within online social networks. The experimental conditions involved 2x2 between subjects experiments utilizing two Facebook pages created for the experiment. A between subjects design was utilized because of the significant potential for a learning effect to occur given the types of stimuli being presented to subjects. The primary independent variables

of interest were group status (in-group or out-group) which was operationalized through asking subjects to *Like* the page (or making no request related to *Liking)* and the level of positive social communication on the page (low level or high level.

Study 2 (Forced *Like*): Participants

Students participating in undergraduate liberal arts and sciences courses at a small Midwestern community college were asked to participate in the research. Students were offered extra credit within their academic coursework for participation. All of the sixty-two individuals who open the online consent form agreed to participate, however, 4 of the individuals were under the age of 18 and so their ability to participate was terminated one question after the informed consent and prior to any survey questions. Fifty-five individuals responded to the gender question with 85% (i.e. 47) selecting the description of female. Fifty-six individuals responded to the query about marital status with 75% (i.e. 42) of respondents claiming unmarried status. The mean age of the participants in the non-experimental phase was 27 and the median age was 23. Charts displaying participant demographic information are contained in APPENDIX 6. Of the 55 participants, 46 confirmed using Facebook. Individuals who did not report using Facebook did not complete the entire survey.

Study 2 (Forced *Like*): Informed Consent

Informed consent was obtained prior to administration of the experimental conditions or survey questions. The online survey software Qualtrics provided software logic allowing completion of the survey only if the prospective subject agreed to the conditions outlined in the informed consent document. Additionally, potential participants were required to state his/her age was 18 or greater. If the prospective participant did not agree to the informed consent then the online survey automatically closed before any questionnaire questions could become visible.

Similarly, if prospective participants did not acknowledge being 18 years of age or older the survey immediately ended.

Study 2 (Forced *Like*): Experimental Research Design

A 2x2 between subjects design was used to provide analysis of any causal relationships between the independent variables of group status and level of social communication and dependent variables such as perceived anthropomorphism and likelihood to engage in word-of-mouth communication. The 2x2 design was also intended to provide analysis of any main effects, interactions or correlations between different variables. One independent variable was related to the subject's assigned group status (in-group or out-group) and the other was related to the amount of social communication (high or low level) posted on a Facebook page by the subject. In order to create the independent variables the principle investigator had to create and post a variety of information on Facebook. A description of the process utilized to create the Facebook *pages* is followed by detailed descriptions of the independent variables.

At the time of this writing, options within Facebook allow any user to create a *page* for an organization. Companies interested in creating a presence on Facebook do so by creating a *page*. To create the independent variable conditions the principle investigator created two Facebook *pages* representing two versions of the same fictional organization. Facebook pages typically have many options for individuals to interact with the page. To hold the experimental conditions constant for all participants the permissions allowing interactivity on both Facebook pages were restricted. For example, each of following was unchecked within the *Manage Permissions* of each page: 1) Everyone can post to Destination Fun Travel's timeline, 2) Everyone can add photos and videos to Destination_Fun Travel's timeline, 3) People can tag photos posted by Destination_Fun Travel. These restrictions were necessary to hold the

experimental conditions constant within an online environment which includes approximately 60 million status updates per day (Facebook, n.d.). Such restrictions do bring into question the external validity of any experiment within an online social networking environment. Blascovich, Loomis, Beall, Swinth, Hoyt, and Bailenson (2002) in writings that pre-date Facebook did suggest experimental conditions, even within virtual environments, can facilitate a "mundane realism" (p. 104) and thereby enhance the independent variables in a way that makes the experimental conditions as close to real-life as may be possible. The aspects of the two Facebook pages that were allowed to vary were part of the low and high social communication variable and the in-group/out-group status variable. Specifically, both *pages* were for a fictional travel agency named Destination Fun Travel and used the same main photo and included the same tagline suggesting the firm focused on spring break travel. Identical versions of vacation related photos were posted on each *page* in the same order. Also, the vacation photos did not involve any close up images to avoid confounds related to attractiveness or gender of individuals in the photos. A fictional travel firm was used as the condition to help avoid brand impacts on subject perceptions. Madonald & Sharp (2000) determined that customers who are familiar with a particular brand within a set of choices will investigate fewer alternatives overall and so a fictional brand was used. Additionally, a travel firm was determined, through the second exploratory survey, to be less impactful in generating brand opinions than products such as cars, shoes and a variety of other products while still being more interesting to customers than products such as picture frames or movie theatre.

In each of the four experimental conditions subjects were directed to click on a link to a Facebook page and to review the information on the page.

Study 2 (Forced *Like*): Group status independent variable

The first independent variable was related to the conceptual idea of in-group or out-group status. Group status was operationalized by asking subjects experiencing the in-group status condition to click on the *Like* button for a fictional company's (i.e. Destination Fun Travel) Facebook page. Subjects experiencing the out-group status were not asked to click on the *Like* button but were simply asked to visit the page. This procedure was used to try to represent the conditions pursued by Reeves and Nass (1996) when they placed humans on teams with computers and determined that identification could play a role in social response (i.e. anthropomorphism).

The use of a fictional firm for the experimental conditions was intended to help subjects avoid inadvertent feelings of in-group status when in the out-group condition.

Study 2 (Forced *Like*): Level of social communication independent variable

The second independent variable was the level of social communication interaction taking place on the Facebook page viewed by subjects. The two conditions were low social communication and high social communication. The conceptual level of interaction was operationalized through the use of *Wall postings*, *Likes* and responses to *Wall Postings* within the Facebook pages. All *Wall postings* were generated by the principle investigator but were posted using alias accounts. The alias accounts were created using a Facebook feature that allows for the creation of a *Page* attached to an existing user. Facebook allows such *pages* to be organized in almost identical fashion to real human's pages but the pages are limited in the types of interaction that can be performed and Facebook does not count the *Pages* as human *Pages*. The experiment only required *Wall postings* and *Likes* so the alias *Pages* worked well. Subjects were not directed to review any of the alias accounts. However, because subjects were able to see the

alias pages the pictures placed on each alias *page* were carefully chosen. For example, none of the alias page main photos involved a close-up and all photos enough distance that the attractiveness or lack of attractiveness of the person in photo could not be determined. Examples of the photos used in the alias accounts are part of APPENDIX 5.

The low condition contained 6 page *likes (*others *liking* the firm overall*)*, 2 *likes* of photos on the company's Facebook page and 2 comments by other individuals (confederates) on the page. Examples of the postings for the low social condition are visible in APPENDIX 3. The high social communication condition contained 27 page *likes (*others *liking* the firm overall*)*, 10 *likes* of photos on the company's Facebook page and 13 comments on the page. All of the *Likes* and *Wall postings* in low communication condition were also presented in the high communication condition and were presented in identical fashion on both Facebook pages. Examples of the postings for the low social condition are visible in APPENDIX 4. Finally, the level of social communication also involved *page Likes* in the sense of the number of individual who had *Liked* the business page in a semi-permanent way. This aspect was controlled in all conditions with 6 *page Likes* existing for the low social communication condition and 26 *page Likes* for the high level of social communication. The *page Likes* were accomplished by asking students taking an Introduction to Public Speaking course at the same public university to *Like* the page.

Study 2 (Forced *Like*): Survey Design

Subjects completing the informed consent and acknowledging the age requirement were randomly assigned to one of the four experimental conditions by the Qualtrics online software program. Subjects were asked a series of demographic questions as well as questions related to interpersonal influence, loneliness and behavioral cues in social situations. Subjects were also

asked to respond a series of example postings from Facebook including a posting copied from the Burton snowboard manufacturer's Facebook page. Responses to these non-experimental questions served as a manipulation check to the experimental conditions. The last process step before subjects viewed the experimental conditions included asking subjects if they used Facebook. Subjects who did not use Facebook did not complete the experiment. Subjects who acknowledged using Facebook were automatically provided a hyperlink to a Facebook page associated with their condition assignment. Along with the hyperlink subjects were alerted that they might have to sign in to Facebook to view the Destination Fun Travel firm page. No subject log-in information was asked for and no personal identifiers were collected.

One example of a specific question serving as a manipulation check in the study was a question to determine the level of effectiveness of the independent variable of group status. To help determine if the in-group status conditions produced feelings associated with in-group status the all participants in every condition were asked: "How strong of a connection do you feel to Destination Fun Travel?" with responses on a 7-point Likert-type scale ranging from "Much Weaker" to "Much Stronger."

A summary of the survey questions used in Study 2 (Forced *Like*) includes:

- Three questions related to informed consent and acknowledgement of being 18 years or older.

- Four demographic questions including: gender identification, age, marital status and ethnic identification.

- Twelve questions from the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence.

- Three questions from the Hughes, Waite, Hawkley, & Cacioppo (2004) loneliness scale as well as an item suggested by Lennox and Wolfe's (1984) social interaction scale.

- Sixty-five questions related to Facebook usage and Facebook interactions as well as responses to images and text presented from Facebook pages.

- Seventeen identical questions were asked related to the non-experimental conditions

The survey concluded with a message of appreciation for participation.

Study 2 (Forced *Like*): Reliability Measures

Reinard (2008) suggested that "negatively worded statements often reduce the reliability of the measure" (p. 371) and so the survey included only positive phrased statements. Several questions were included in the survey that asked very similar questions but at different places in the survey. For example, the question: The postings by Destination Fun Travel seem personal" will be asked twice using the same wording and 7-point Likert-type scale. Also, data was collected about the perceived humanness of the online entity through two very similar questions: 1) "The postings by Destination Fun Travel are human-like" using a 7-point Likert scale and through the question: 2) "Review the postings by Destination Fun Travel. How human-like would you rate the postings?" using a sliding bar scale with a range of 1-100.

Study 2 (Forced *Like*): Validity Measures

The use of a convenience sample reduces the external validity of this study. That is, the likelihood that the sample represents the overall population of social networking users is reduced. Internal validity was improved in the experimental study through the use of random assignment of subjects to one of the four possible conditions. Another approach used to improve the validity of the questionnaire and experiment follows what Reinard described as "predictive validity" (2008, p. 128) through the use of a previously validated measures. Although no directly analogous surveys were found a number of different sets of questions were found in previous research to improve validity in the current study. Twelve questions from the Bearden, Netemeyer and Teel's (1989) Measurement of Interpersonal Influence were used in the survey as well as an

item suggested by Lennox and Wolfe's (1984) Self-Monitoring Scale which was included as a validity check. Finally, three questions from Hughes et al. (2004) loneliness scale were included in the survey.

Study 3: Experiment Overview

Study 3 replicated most of the structure and variables of Study 2 (Forced *Like*) including the 2x2 between subjects design using 2 different Facebook pages representing a fictional travel firm, Destination Fun Travel. The purpose of Study 3 was to perform another evaluation of the hypotheses explored in Study 2 (Forced *Like*) but with a larger sample size.

Study 3: Participants

Participants in Study 3 were students taking a senior level undergraduate business course at a large Midwestern university. The students were offered extra credit within their academic coursework for participation. 191 students started the survey and 182 completed at least some parts of the survey resulting in a 95% completion rate. Of the 184 individuals who answered the gender question, 58 were female. As with Study 2 (Forced *Like*), participants were asked about their use of Facebook and individuals who did not use the site did not complete the full survey. The result was 163 individuals responded as users of Facebook and continued on with the survey.

When participants in Study 3 were asked to "Please check the circle that best describes you" and provided the choice of female or male 68% responded as male. To determine the ethnicity of those participating in the survey subjects were asked "Would you describe yourself as:" and left to select an option. Of the responses, 78% responded as white/ Caucasian, 14% as Asian, 5% as Black / African America, 2 % as Hispanic / Latino, and 2% as other. No responses were obtained for Pacific Islander or American Indian / Native American.

Study 3: Informed Consent

Informed consent for Study 3 was conducted the same as in Study 2 (Forced *Like*).
Individuals receiving a hyperlink to potentially participate in the survey were asked to
acknowledge their consent and if they did not agree the survey closed before any survey
questions or experimental conditions could be experienced. As with Study 2 (Forced *Like*),
participation in Study 3 was limited to individuals affirming their age to be 18 or over. If an
individual did not affirm his/her age as 18 or greater the Qualtrics online survey system closed
the survey prior to any survey questions or experimental conditions.

Study 3: Experiment Research Design

As with Study 2 (Forced *Like*), the experiment involved a 2x2 between subjects
experimental design utilizing many of the same conditions as Study 2 (Forced *Like*). The only
change to the experimental design was that the group status independent variable was
operationalized differently. In Study 3 subjects assigned to the in-group status conditions were
asked to imagine they had *Liked* the Destination Fun Travel page instead of being asked to
actually click on the *Like* button on the Destination Fun Travel Facebook *Page*.

Study 3: Survey Design

The survey used in Study 3 was almost identical to Study 2 (Forced *Like*). After
completion of Study 2 (Forced *Like*) it was discovered that four of the twelve questions
replicated from the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal
Influence were incorrectly scaled when presented in Study 2 (Forced *Like*). Therefore, four
corrections were made to the survey before it was used in Study 3.

Study 4: Content analysis

According to Dix, Finlay, Abowd, and Beale (2004) ethnography involves a "recording of the interactions between people and between people and their environment" (p. 470). In this study, content analysis, was employed through unobtrusive observational techniques and was used to explore interactions on Facebook with coding schemes focused on anthropomorphism and word-of-mouth communication. Content analysis was considered an important part of this work because of the exploratory nature of the study and the fluidity of the online social networking context. Additionally, the unobtrusive observational approach was employed to balance the questionnaire format of the experiments utilized in the quantitative portions of this project.

The phrase unobtrusive observational techniques was first used by Webb, Campbell, Schwartz, and Sechrest (1966) to describe the gathering of data without interaction between researches and subjects. The importance of utilizing methods which did not involve interaction between the research and those being researched was highlighted when Webb et. al (1966) noted:

> Interviews and questionnaires intrude as a foreign element into the
>
> social setting they would describe, they create as well as measure attitudes,
>
> they elicit atypical role and response, they are limited to those
>
> who are accessible and who will cooperate, and the responses obtained
>
> are produced in part by dimensions of individual differences irrelevant
>
> to the topic at hand. (p. 1)

In part, the unobtrusive approach was employed as a means to combat the potential for those studied to claim one type of behavior while engaging in another. In other words, viewing what individuals post on Facebook instead of asking the individuals to describe what they would post

was viewed as useful exploratory method in the qualitative portion of this research and was viewed as a good balance to the quantitative experiments within this project.

Study 4: Participants

Townsend (2000) noted that "the Internet is accessible to virtually anyone" (p. 395) and this statement is particularly true of online social networking platforms such as Facebook that attract hundreds of millions of users who connect to the site via a mobile device such as a smartphone (Protalinski, 2012). For example, on any given day, between 9,000 and 20,000 individuals may read information on, or post a comment to, the Target *Page* on Facebook. The lack of participation constraints created an opportunity for Content analysis within Facebook to involve almost any type of participants. A review of the overall participation on Facebook by American internet users from Rainie, Brenner, and Purcell (2012) illustrates that 70% of women and 63% of men use Facebook. In terms of age, 83% of 18-29 year olds, 72% of 30-49 year olds, 56% of 50-64 year olds, and 40% of those over 65 were found to use Facebook. Although these figures change on an hourly basis and do not necessarily reflect the participation on the *Pages* selected for unobtrusive ethnographic observation the numbers provide an overall sense of use of the platform.

Study 4: Informed Consent

Unobtrusive observational research was used for the Content analysis and so no interactions took place between the researcher and the observed. No informed consent was provided as the principle investigator only viewed Facebook postings which were completely accessible to hundreds of millions of registered Facebook users.

Study 4: Content analysis Design

The principle investigator engaged in unobtrusive observational activities on the Facebook platform without any attempts to conceal identity or deceive but the investigator did not engage in interactions with the observed individuals or firms. The data collection method used in the Content analysis resembled an electronic version of what Berg (2001) described as "accretion measures" (p. 204). Accretion measures, according to Berg (2001) involve the researcher keeping track of "deposits over time"…"without intrusion from researchers" (p. 204). Analysis on the Facebook site was narrowed to English language *Postings*. To provide depth of analysis, investigation took place on less than five business Facebook pages but spanned *Postings* from late 2011 through early 2013. Facebook pages of businesses involved in the ethnographic research for this study were limited with a focus on OXO, Target and Method. The firm OXO offers products for use in the kitchen as well as items for organizing and cleaning throughout a customer's home. The company had over 150,000 individuals who have clicked on the main *Like* button on the page to follow the firm on Facebook as of January, 2013. OXO and has used its Facebook page to promote new products, ask customers about their experiences and make connections with customers. As of early 2013, the general merchandise retailer Target had approximately 20 million individuals who chose to connect to its' Facebook page. Target corporation offers household products and general merchandise to customers online and in physical stores. The home cleaning and personal care products maker Method had just over 400,000 individuals connected to its' Facebook page as of early 2013. Method has typically used its Facebook page for promotion of products but also used *Wall Postings* for public relations related to the firm as well as social and environmental causes.

Thousands of postings were reviewed during the time of the ethnographic study. In most cases the postings were reviewed and cataloged manually by the principle investigator. Several attempts were also made to process sets of Facebook *Postings* through the software Dedoose.

Coding schemes included the broad themes of anthropomorphism and word-of-mouth communication. Specific coding items related to particular hypotheses as shown in Table 1. Table 1 also includes a note related to coding for unrelated or irrelevant comments which were not discussed at length in this research.

Transcriptions of comments by in individuals or the firms reviewed for this content analysis retained spelling, grammar and punctuation use as viewed in the original *Postings*.

Coding for Unobtrusive Content analysis	Definition	Related Hypotheses
Anthropomorphic—Elicited Agent Knowledge	*Postings* in which an individual addresses the firm in a human-like way.	(H_2)
Anthropomorphic—Effectance Motivation	*Postings* in which an individual addresses the firm or refers to the firm in human-like terms seemingly in a heuristic way.	(H_8), (H_9)
Anthropomorphic—Social Motivation	*Postings* or *Likes* seeming to be related to a social connection motivation.	(H_1)
Word-of-mouth communication—General and Self-Disclosure	Comments on a firm's *Wall* in which a Facebook users promotes the firm's product in general terms or through self disclosure.	(H_3), (H_5)
Word-of-mouth communication—Related to Trust	Communication by a Facebook user displaying trust for the organization. Postings displaying affection for the firm were included in this coding.	(H_4), (H_9)
Personal, Unrelated, and/or Irrelevant	*Postings* not related to the Page or information of a personal nature unrelated to the study.	*Not applicable*

Table 1. Content analysis coding

Software used in studies

The software package JMP Pro, version 10, was used for analysis of descriptive and inferential statistics. Microsoft Excel, version 2010, was used for creation of some charts and figures. Attempts were also made to use the qualitative research analysis software Dedoose for portions of analysis in Content analysis.

CHAPTER 4. RESULTS AND DISCUSSION

Study 1: Results

Results of the first exploratory study confirmed that enough individuals in the prospective sample used Facebook and interacted with companies on Facebook. Ninety-eight percent of the participants (*n*=136) reported using Facebook. The average number of companies participants reported *Liking* was 6 with a median of 2.

The results of the second exploratory survey helped to frame the experiments that were conducted later by showing possible product categories appropriate for the experimental conditions. Fifteen different goods and services/service providers were listed and participants were asked to rate "how important a particular brand is to you when considering purchasing" using a 7-point Likert-type scale anchored by "Extremely Important" and "Not at all Important" with higher scores being lower importance.

To avoid picking a good or service that would generate brand related emotions a good or service that was neither highly regarded or disregarded was considered the best choice for the independent variable in Studies 2 and 3. Scores for shoes (*M*=2.00, *SD*=.97) and cars/trucks (*M*=2.22, *SD*=1.44) showed those items to products in which brand was most important whereas movie theaters (*M*=5.28, *SD*=1.53) and picture frames (*M*=5.11, *SD*=1.78) were the products in which brand mattered least. Several other goods & services scored closer to "Neither Important nor Unimportant" including oil changes (*M*=3.11, *SD*=2.05) and vacations (*M*=3.22, *SD*=1.56). Based on the results a vacation travel firm was determined to be the choice as firm to represent the independent variables.

Participants in the first exploratory survey were also asked how many Facebook *Friends* they had and how many companies had been connected to using the *Like* button on the firm's

Facebook page. The results showed the average participant having nearly five hundred Facebook *Friends* (*M*=490, *SD*=373) and being connected to almost six companies (M=5.98, SD=23). The first exploratory survey showed a significant positive correlation $r(136) = .34$, $p=.0001$ between the number of Facebook *Friends* an individual had and the number of companies the individuals had chosen to connect to.

Study 1: Discussion

The second exploratory survey included questions concerning brand preferences and the responses given by participants provided direction on how to make the two main experiments brand neutral. Other literature has described potential priming effects created by brands (Fitzsimons et al., 2008). Therefore, it was important that a fictional firm be used in the experimental conditions and that the product category affiliated with the firm not influence subjects. Based on the results of the second exploratory survey it was determined the fictional firm would be a travel agency.

Study 2 (Forced *Like*): Results for Experimental Conditions

Study 2 (Forced *Like*): Contingency Analysis

A contingency analysis of the two independent variables of group status (i.e. in-group / out-group) and social communication (i.e. low / high) showed a relatively equivalent number of observations in each of the experimental conditions.
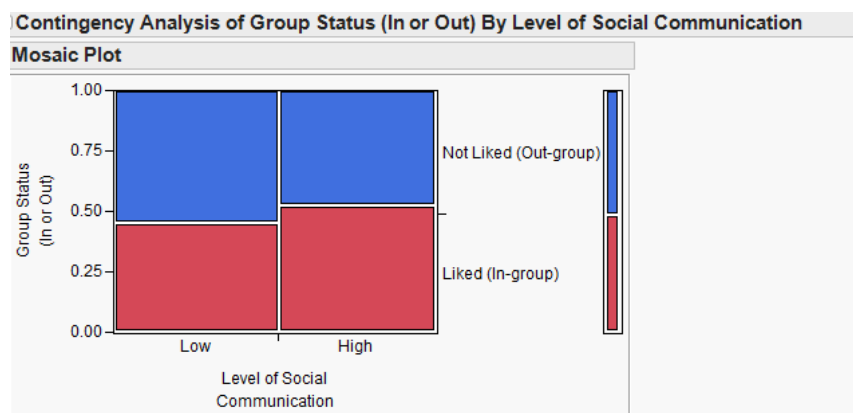
Figure 3. Contingency Analysis for Study 1

Study 2 (Forced *Like*): Results for Hypothesis 1

Hypothesis 1 (H_1): Social interactivity between organizations and others within online social networks will create a priming effect and elicit social responses from subjects.

To determine participant's impressions of the level of sociality on a business' Facebook page a survey question was presented in each experimental condition which asked about perceptions of the social nature of communication on the firm's page. Responses were coded using a 7-point Likert-type scale anchored by choices "Strongly Disagree" and "Strongly Agree." The overall scores on this measure ranged from 1 to 7 (M=4.74, SD=1.48) revealing that overall perceptions of the communication on the Facebook page were neutral trending toward agreement of sociality. Individuals exposed to the two conditions involving high levels of social communication were more likely to perceive the businesses comments as social (M=5.42, SD=1.21) whereas subjects experiencing both the low level of social communication conditions (M=4.1 and SD=1.44) were much less likely to do so. The high social communication in-group (i.e. *Liked*) scores (M=5.3 and SD=1.33) were slightly less than the high social communication out-group scores (M=5.55 and SD=1.13). The low social communication in-group responses to the sociality question (M=4.55 and SD=1.33) were less than both high social communication

scores while the subjects in the low social communication out-group condition (M=3.72 and SD=1.48) rated the sociality of the business Facebook to lowest of the lowest of all four conditions.
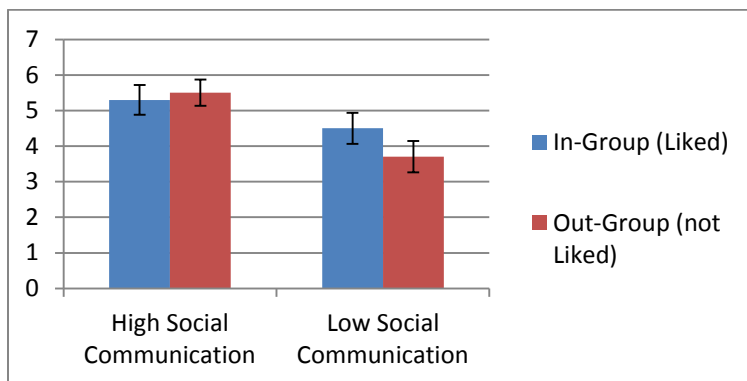
Figure 4. Study 2 (Forced *Like*), Hypothesis 1, Means with Standard Error bars
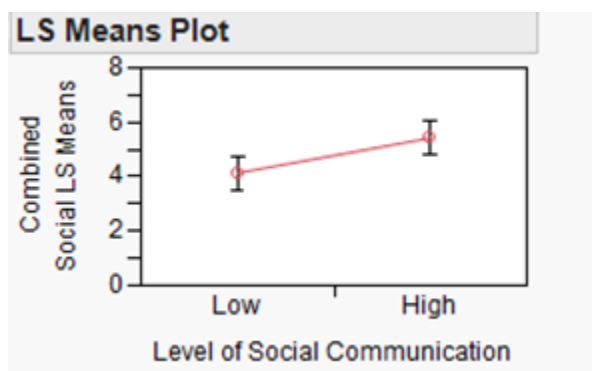
Figure 5. Study 2 (Forced *Like*), Hypothesis 1, Main effect for social communication

A two way Analysis of Variance (ANOVA) of the independent variable of social communication (high or low level) and the independent variable of group status (in-group or out-group) was conducted. Group status was included in the analysis to determine any potential

interactions between the variables. No interaction was found ($F(1,35) = 1.58$, $p=.21$) between the two independent variables of level of social communication and group status.

The ANOVA produced a significant main effect ($F(1,35) = 4.16$, $p=.0051$) related to the level of social communication illustrating that changes to the level of social communication did lead to changes in the perceived sociality of the business.

Post hoc analysis was also conducted. Pairwise combinations analyzed using LS Means Differences Student's t contrast showed the responses in the high social communication, out-group (i.e. not *Liked*) condition to be significantly different ($F(1,35) = 9.23$, $p=.004$) from the low social communication, out-group condition which highlighted the importance the level of social communication. Additionally, use of the LS Means Differences Student's t contrast feature detailed a significant difference ($F(1,35) = 7.22$, $p=.01$) between the high social communication, in-group (i.e. *Liked*) condition and the low social communication, out-group condition. It was expected that the high social conditions would score higher than the low social conditions but an unexpected outcome appeared from the measure of sociality within the high social communication out-group condition. Although group status was not part of H_1 it was expected that the out-group conditions, in which the subjects were not asked to *Like* the business' Facebook page, would score lower on the sociality measure.

Analysis of responses regarding the perceived sociality of the firm found participant's perceptions of the social nature of the business was influenced by the level of social communication on the firm's Facebook page and provide support for H_1 in Study 2 (Forced *Like*).

Study 2 (Forced *Like*): Results for Hypothesis 2

Hypothesis 2 (H₂): Liking an organization within Facebook will lead to an increase in anthropomorphism of the organization.

The concept of in-group status was operationalized through a condition in the experiment which asked some learners to *Like* the Facebook page of a fictional travel agency while other learners experiencing the out-group condition were not given any instructions regarding *Liking* the firm. The dependent variable was participant's response to the statement "The postings by Destination Fun Travel seem Human-like" with responses on a 7-point Likert type scale. Results ranged from 2 to 7, (*M*=4.76, *SD*=1.08) showing that overall respondents were not averse to describing the company's postings as human-like. Individuals exposed to the in-group conditions had higher mean scores related to the anthropomorphism of the businesses comments (*M*=4.95, *SD*=1.31) whereas subjects experiencing the out-group conditions (*M*=4.57 and *SD*=.76) presented lower perceptions anthropomorphism.
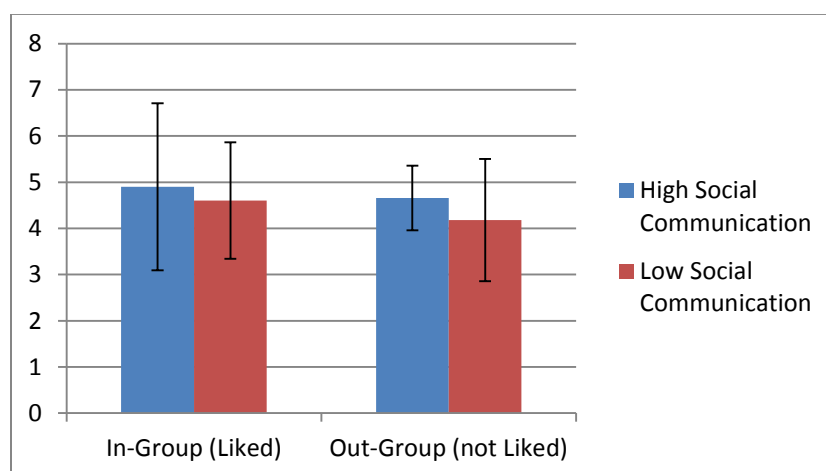
Figure 6. Study 2 (Forced *Like*), Hypothesis 2, Means with Standard Error bars

As expected the experimental condition with the highest scoring mean related to anthropomorphism of the business was the in-group high social communication condition

(*M*=4.90 and *SD*=1.81) suggesting that subjects were at least neutral and close to "Somewhat Agree" on the question of anthropomorphism.

Contrary to expectations, the next highest ratings did not come from the other in-group condition. Instead, it was the out-group high social condition (*M=4.66*, *SD=*.70) and then the in-group low social (*M=4.6*, *SD=*1.26) condition and finally the out-group low social (*M=4.18*, *SD=*1.32) condition.

A two way ANOVA including the independent variables of group status and level of social communication and the dependent variable of the "human-like" question was conducted. The analysis produced an insignificant ($F(1,35) =$.59, $p=$.44) but noticeable spreading interaction. There was no main effect for group status ($F(1,35) =$1.11 , $p=$.29) suggesting that subjects did perceive their group status as a significant influence on whether the firm's social interactions appeared human-like. There was also no main effect for the level of social communication ($F(1,35) =$1.55 , $p=$.22).
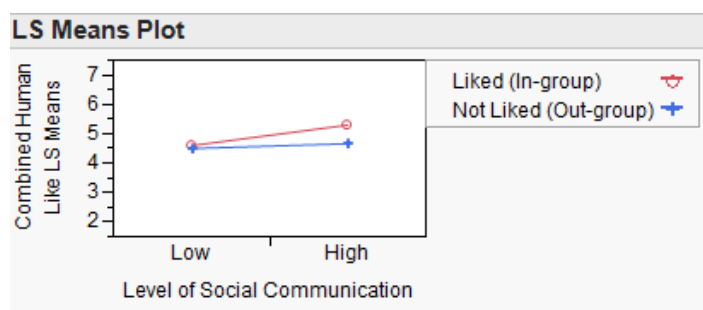
Figure 7. Study 2 (Forced *Like*), Hypothesis 2, Main effect for social communication

Support for the H$_2$ was not found as subjects asked to *Like* the Facebook page (in-group status) were not statistically more likely to anthropomorphize the firm than individuals not asked to *Like* the page.

As a manipulation check to the human-like statements a question was asked of all participants in every condition: "How strong of a connection do you feel to Destination Fun Travel?" with responses on a 7-point Likert-type scale ranging from "Much Weaker" to "Much Stronger." The in-group conditions did produce a higher response (*M*=3.45, *SD*=1.23) than the out-group conditions (*M*=2.94, *SD*=1.31) but the gap between the average scores was small and indicated no real difference between the two groups in terms of feelings of group status. The lack of group status sentiment was reinforced by analysis of the combined responses to the statement of how human-like the Facebook paged seemed were compared, using Cronbach's alpha with the responses asking closeness question with a result of .88.

Study 2 (Forced *Like*): Results for Hypotheses 3

Hypothesis 3 (H$_3$): Subjects who anthropomorphize organizations within online social networks will be more willing to engage in word-of-mouth communication.

It was expected that the subjects who were more likely to perceive a business as human-like (i.e. anthropomorphize) would be more willing to engage in word-of-mouth communication related to the firm. Subject's willingness to engage in word-of-mouth communication related to the company's Facebook page was measured using the question: "How likely would you be to share the information from the Destination Fun Travel Facebook page with a friend?" on a 7-point Likert scale. Review of all responses to all conditions revealed (*M*=2.60, *SD*=1.42) that participants were generally not interested in participating in word-of-mouth communication related to the business' Facebook page. The measure of anthropomorphism (*M*=4.76 *SD*=1.08)

revealed that individuals were, on average, somewhat above neutral as far as the likelihood to anthropomorphize the business.

Spearman's ρ correlation was used to evaluate potential relationships between the variables. As predicted, individuals who were more likely to perceive the Facebook communications of the business as human-like were also more likely $r(39) = .81$, $p<.0001$ to be willing to pass on specific information from the Facebook page to a friend. Although these results do not suggest a causal relationship between the variables the results do show statistically significant strong positive correlation. Because individuals in the study who did anthropomorphize the firm on Facebook were also more likely to engage in word-of-mouth communication support is provided for H_3.

Study 2 (Forced *Like*): Results for Hypotheses 4

Hypothesis 4 (H_4): Increase in positive social communication within a group that exists in an online social network will be lead to increased trust of the organization by in-group individuals.

H_4 predicted increased positive social communication within an online social network would improve subject's willingness to trust the organization. The hypothesis was explored by having subjects experience a low level or a high level of positive social communication. Participants were then asked to rate their perception of how trustworthy the comments presented by the firm seemed to be. A 7-point Likert-type scale anchored by "Strongly Disagree" and "Strongly Agree" measured responses to the statement: "The postings by Destination Fun Travel seem trustworthy." The combined results for all conditions showed subjects essentially neutral ($M=3.94$, $SD=1.37$) as far as trustworthiness of the firm. As expected, individuals experiencing the two high level conditions of social communication did show greater scores ($M=4.42$,

SD=1.30) than individuals experiencing the two low levels of social communication (*M*=3.5, *SD*=1.31). Also as anticipated, the highest mean score (*M*=4.7, *SD*=1.56) came from the condition involving a high level of social communication and in-group status (from the second independent variable of group status) whereas the lowest responses came (*M*=3.18, *SD*=1.32) from the low level of social communication and out-group status condition.

The independent variable of group status was included with the level of social communication variable as part of a two-way ANOVA. No significant interaction was found (*F*(1, 35) =.01, *p*=.88) between the two main independent variables. A significant main effect was found for the level of social communication (*F*(1, 35) =4.31, *p*=.045) describing the existence of a causal relationship, in this sample, between the level of positive social communication and the level of trust individuals have in the organization.
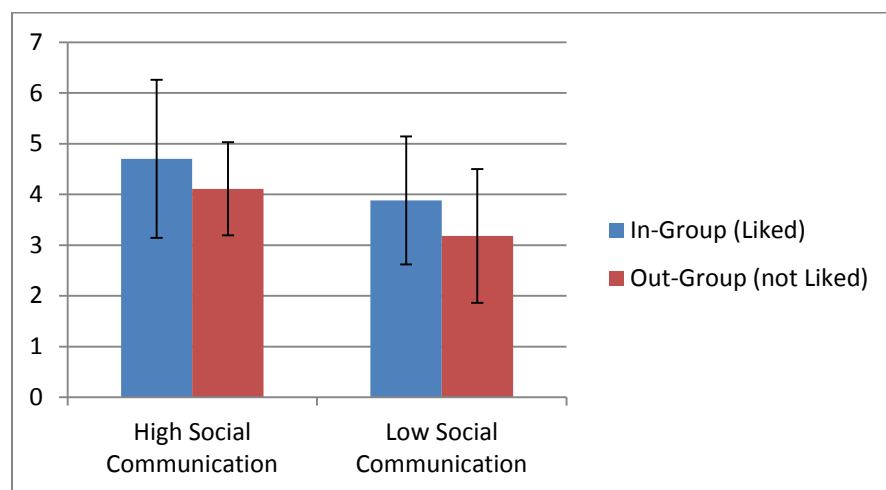
Figure 8. Study 2 (Forced *Like*), Hypothesis 4, Means with Error bars

Although no significant effect (*F*(1, 35) =2.39, *p*=.13) was found for group status the results for in-group status (*M*=4.31, *SD*=1.45) and out-group status (*M*=3.6, *SD*=1.23) were worth noting for future research related to the potential role of trustworthiness in addition to the

level of positive social communication. Pairwise combinations were used to conduct post hoc

analysis using LS Means Differences Student's t contrast. The analysis showed the responses in

the high social communication, in-group (i.e. not *Liked*) condition to be significantly different

($F(1,35) = 7.10$, $p=.01$) from the low social communication, out-group condition which

highlighted the importance the level of social communication.

The results of the two-way ANOVA find support for H$_4$; the prediction that increased

positive social communication between in-group individuals and the organization would improve

subject's willingness to trust the organization.

Study 2 (Forced *Like*): Results for Hypothesis 5

Hypothesis 5 (H$_5$): Increase in the level of social connectedness between an individual
and an organization within an online social network will cause an increase in the
willingness to engage in word-of-mouth communication.

H$_5$ predicted increased willingness of individuals to participate in word-of-mouth as the

level of social connection increased. Social connection was operationalized through the in-group

and out-group conditions within the experiment as the independent variable. Individuals who

were asked to *Like* the Destination Fun Travel page were considered to have in-group status, and

therefore feel more connected to the organization, whereas individuals not asked to *Like* the firm

were considered more socially distant and therefore out-group. The dependent variable was the

question asking "how likely would it be that you be that you would pass this posting on to a

friend" with responses received using a 7-point Likert scale anchored by the choices "Very

Unlikely" and "Very Likely." The combined responses for all participants ($M=2.69$, $SD=1.41$)

revealed subjects general lack of willingness to engage in word-of-mouth communication related

to the Facebook viewed. A review of mean scores for subjects experiencing the in-group

conditions produced results (*M*=3.15, *SD*=1.56) suggesting "somewhat disagree" was a typical

overall outcome even with the sense of social connectedness presented in the study. Responses

from participants in the out-group conditions (*M*=2.25, *SD*=1.20) were clearly in "disagree" area.

The in-group low social communication condition produced the highest score (*M*=3.22,

SD=1.09) with the next highest ratings coming from the in-group high social communication

condition (*M*=3.1, *SD*=1.85). The two lowest scores were from the out-group high

communication condition (*M*=2.33, *SD*=1.11) and the out-group low social communication

condition (*M*=2.18, *SD*=1.32) suggesting a possible interaction based on the level of social
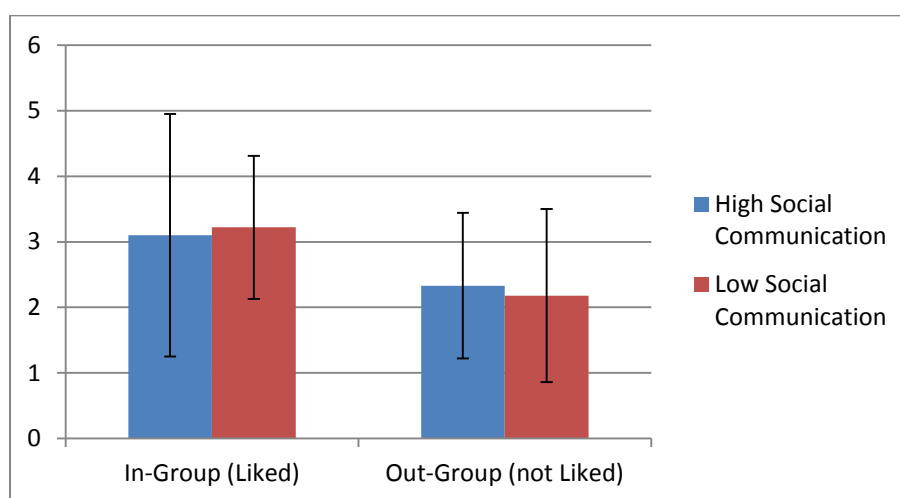
communication.

Figure 9. Study 2 (Forced *Like*), Hypothesis 5, Means with Standard Error bars

A two-way ANOVA was used to test for main effects and the independent variable of

social communication was included to determine if there were interactions between the variables.

No interaction was found ($F(1, 35) = .09$, *p*=.76) between the two independent variables. The

ANOVA did reveal a statistically significant main effect ($F(1, 35) = 4.06$, *p*=.05) for the

independent variable of group status with relation to the likelihood subjects in the sample would

engage in word-of-mouth communication based on group status. The level of social communication did not produce a main effect ($F(1, 35) = .001$, $p=.97$) and was not significant.

In Study 2 (Forced *Like*), results showed the typical subject had a low level of willingness to participate in word-of-mouth communication related to the Facebook page viewed. Support was originally found for H_5 at p=.05. However, because the same measure was used for two hypotheses in two studies, Bonferroni post hoc analysis was utilized to confirm significance. When Bonferroni analysis was applied to the results in Study 2 (Forced *Like*) (.05/2 = .025) the results from *(H_5)* in Study 2 (Forced *Like*) ($F(1, 35) = 4.06$, $p=.05$) would not be significant.

Study 2 (Forced *Like*): Results for Hypotheses 6

Hypothesis 6 (H_6): Subjects scoring higher on the adjusted Hughes et al. (2004) loneliness index will be more prone to anthropomorphize organizations within online social networks.

The expectation that individuals scoring higher on the adjusted Hughes et al. (2004) questions would be more likely to anthropomorphize organizations within online social networks is based on a relationship found by Epley et al. (2007) between loneliness and the likelihood of anthropomorphizing a familiar pet.

The three questions from the Hughes et al. (2004) were used in the current research to measure subject's self-reported loneliness on a 3-item scale using the choices "Hardly ever, Some of the time, and Often." A comparison of responses to the three Hughes et al. (2004) loneliness questions using Chronbach's alpha produced a result of .88 and so the three questions were averaged into a single loneliness variable. When all subjects were considered the responses indicated low levels of feelings of loneliness (M=1.46), SD=.46).

Likelihood to anthropomorphize was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Across all conditions subjects perceptions of the business as human-like (M=4.64, SD=1.22) showed that individuals in the study were more likely to remain neutral or anthropomorphize the site than to not anthropomorphize.

Spearman's *rho* was used to evaluate potential relationships between the combined loneliness measure and the likelihood subjects would anthropomorphize the business. The distribution of the scores for the loneliness measure was not completely normally resulting in the use of Spearman's ρ instead of Pearson's *r*. As predicted, a positive significant correlation was found $r(60)$ =+.35, p=.004 and revealing that subjects in the sample who scored higher on the loneliness measure were also more likely to perceive the business as human-like.

Support was found for H_6 because subjects who scored higher on the loneliness measure were found to be more prone to anthropomorphize the business within an online social network.

Study 2 (Forced *Like*): Results for Hypotheses 7

Hypothesis 7 (H_7): Subjects scoring higher on the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence will be more prone to anthropomorphize organizations within online social networks.

Twelve questions related to interpersonal relationships, branding, and word-of-mouth communication came were sourced from the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence. Each statement was presented using a 7-point Likert-type scale anchored by "Strong Disagree" and "Strongly Agree." It was predicted that subjects scoring higher on the Bearden et al. (1989) measures would be more prone to anthropomorphize organizations within online social networks.

Four of the twelve questions were removed from the analysis in Study 2 (Forced *Like*) because of a minor coding issue within the questions. A comparison of responses of the eight remaining measures of interpersonal influence using Cronbach's α produced a result of .91. Because of the indication of a high level of internal scale reliability lead, the eight questions were averaged into a single interpersonal influence variable. The single metric resulted in (*M*=2.73, *SD*=1.32) suggesting individuals did not feel a strong need to confirm purchasing choices with friends or influential others.

Likelihood to anthropomorphize was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Combined results from all participant's perceptions of the firm as human-like resulted in (*M*=4.64, *SD*=1.22). Pairwise correlation of the two variables using Spearman's *rho* (54) =+.20, *p*=.17 did not produce a significant result.

Support was not found for H_7 because subjects scoring higher on the combined Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence were not more likely to anthropomorphize organizations within online social networks.

Study 2 (Forced *Like*): Results for Hypotheses 8

Hypothesis 8 (H_8): A higher need for behavior cues in social situations will be associated with an increasing level of anthropomorphism of organizations within online social networks.

To test H_8 subjects were asked to respond to a statement regarding the use of behavior cues in social situations. Responses were obtained using a 7-point Likert-type scale anchored by "Strongly Disagree" and "Strongly Agree." Results of the behavior cues question (*M*=4.13, *SD*=1.77) showed that respondents were neutral, overall, in their need for behavior cues.

Likelihood to anthropomorphize was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Results from all participant's perceptions of the firm as human-like (M=4.64 SD=1.22) showed that individuals in the study were more likely to anthropomorphize the site or remain neutral on the question than to disagree.

Correlation analysis using Spearman's ρ was conducted and $r(55)$ =+.29, p=.02 was statistically significant acknowledging that subjects in the study who were more likely to look for behavior cues from others in social situations were also more likely to anthropomorphize the business within Facebook.

Study 2 (Forced *Like*): Results for Hypothesis 9

Hypothesis 9 (H_9): The level of trust subjects have for companies *Liked* on Facebook prior to the study will correlate to the level the subject anthropomorphizes the company in the current study.

It was expected that trust could serve as a type of proxy for group status and that individuals with a high level of trust of organizations previously *Liked* on Facebook would correlate to high levels of anthropomorphic response to the business in the current study.

Subjects were asked if they had ever *Liked* a company on Facebook before. The thirty participants who responded as having *Liked* firms in the past were then asked how many firms had been liked. The results (M=16.8, SD=15.97) showed a wide range in how many firms had been *Liked* prior to the study with a low of 1 to a high of 72 businesses *Liked* prior to the study. Individuals who acknowledged that they had *Liked* at least one firm in the past were asked to respond to the statement "I trust the companies I have 'Liked' in Facebook" using a 7-point Likert-type scale anchored by "Strongly Disagree" and "Strongly Agree." The overall response

from the 30 participants who stated they had *Liked* firms in Facebook before was that they "Somewhat Agreed" (*M*=4.96, *SD*=1.32) to trusting the companies.

All subjects participating in all conditions of the study had been asked to respond to a statement about their perceptions of the how human-like a version of the Destination Fun Travel *page* on Facebook seemed. For the analysis of H_9 the only results considered related to the human-like statement were from individuals who had stated they had *Liked* at least one company on Facebook prior to participating in the survey. The propensity to anthropomorphize the business shown on the Facebook page was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Results from all participant's perceptions of the firm as human-like (*M*=4.60 *SD*=1.47) showed that individuals in the study were more likely to anthropomorphize the site or remain neutral on the question than to disagree.

Spearman's ρ correlation was used to evaluate potential relationships between the variables. The level of trust individuals reported for companies they had previously *Liked* on Facebook did not correlate *r*(29) =+.15, *p*=.40 to individuals anthropomorphizing the firm in the current study. Therefore, support was not found for H_9.

Study 3: Experiment Research Results

Study 3: Contingency Analysis

A contingency analysis of the two independent variables of group status (i.e. in-group / out-group) and social communication (i.e. low / high) showed close to equivalent number of

observations in each of the experimental conditions.
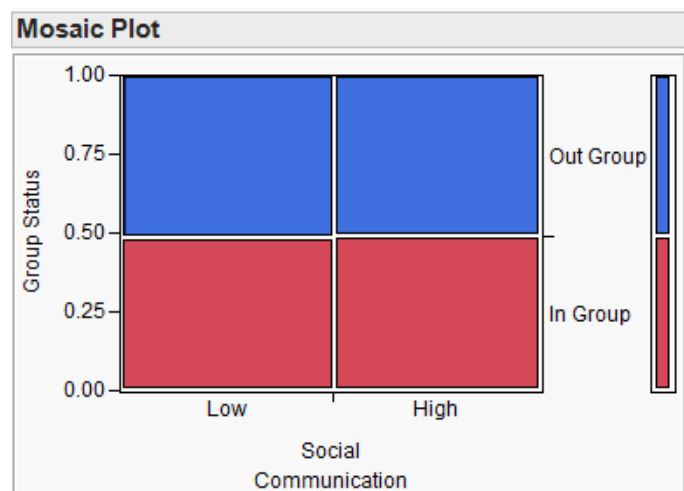
Figure 10. Contingency Analysis for Study 2 (Forced *Like*)

Study 3: Results for Hypothesis 1

Hypothesis 1 (H₁): Social interactivity between organizations and others within online social networks will create a priming effect and elicit social responses from subjects.

In Study 3, as with Study 2 (Forced *Like*), it was expected that subjects would rate a business' Facebook as more social as the level of positive social communication activity increased. The two conditions of the principle independent variable for H_1 included a high social communication condition involving a number of messages on the Facebook page and a low social communication situation in which very few messages existed on the business Facebook page. The independent variable of group status (i.e. in-group versus out-group) was included in the analysis. The dependent variable related to H_1 was the question "The postings by Destination Fun Travel seem social." Responses were coded using a 7-point Likert-type scale anchored by choices Strongly Disagree and Strongly "Agree. Responses on this measure ranged from 1 to 7 with the resulting scores (M=4.52, SD=1.32) suggesting overall perceptions of the

communication on the Facebook page were neutral trending toward agreement of sociality.

Unexpectedly, and in contrast to Study 2 (Forced *Like*), responses to the dependent variable in

the high social conditions resulted in a lower level of response (*M*=4.45, *SD* 1.50) than in the low

social conditions (*M*=4.62, *SD*=1.14). The highest scoring condition was the low social

communication, out-group condition. (*M*=4.8, *SD*=1.18) with the high social communication,

out-group condition (*M*=4.5, *SD*=1.62) scores as the second highest. The high social

communication, in-group condition score (*M*=4.38, *SD*=1.37) and the in-group, low social

communication condition (*M*=4.44, *SD*=1.08) were third and fourth, respectively.
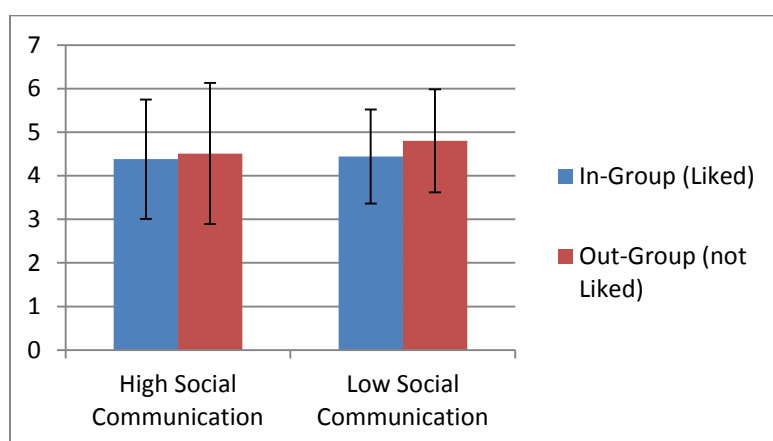
Figure 11. Study 3, Hypothesis 1, Means with Standard Error bars

A two-way ANOVA was conducted. No interactions were found between the two

independent variables (*F*(1, 149) =.28, *p*=.59). No significant main effect was found for the level

of social communication *F*(1, 149) =.64, *p*=.42 which contradicts results found in Study 2

(Forced *Like*). Also, no main effect was found (*F*(1, 149) =1.22, *p*=.27) for the independent

variable of group status.

Because there was no main effect no post hoc analysis were performed. With no main effect for the level of sociality of the messages posted by the firm, H_1 could not be supported in Study 3.
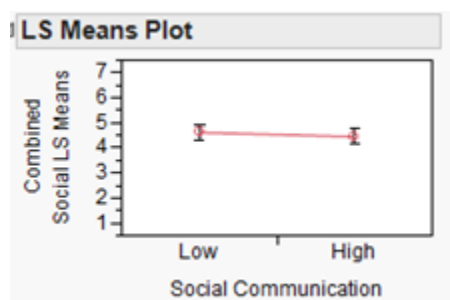
Figure 12. Study 3, Hypothesis 1, Main effect for social communication

To attempt to better understand the results for H_1 in Study 3, several other variables were considered from the dataset in relation to the level of socialness perceived by subjects. Gender of the participants was not shown to have a significant effect ($F(1, 145) =.47$, $p=.49$) on perceived sociality of the firms' Facebook *Page*. Marital status was also not a significant ($F(1, 149) =.10$, $p=.74$) influence. The number of Facebook *Friends* subjects had prior to the study was considered as a possible explanation but no significant relationship $F(1, 145) =.16$, $p=.68$ was found between the high or low categories of number of *Friends*. When ethnicity was considered, the ratings of sociality of the *Page* did not show a significant effect $F(1, 147) =1.03$, $p=.38$ although the difference between Blacks / African Americans and Hispanics $F(1, 145) =2.58$, $p=.11$ seemed interesting enough to note for investigation in future studies.

Study 3: Results for Hypothesis 2

> *Hypothesis 2 (H₂)*: *Liking* an organization within Facebook will lead to an increase in anthropomorphism of the organization.

The concept of in-group status was operationalized through a condition in the experiment which asked some participants to imagine he/she had *Liked* the Facebook page of a fictional travel agency while other subjects were not provided any instructions regarding *Liking*. The primary difference in Study 3 compared with Study 2 (Forced *Like*) is that in Study 2 (Forced *Like*) subjects were asked to actually click on the *Like* button of the business Facebook page whereas in Study 3 subject were only asked to imagine having done so. As with Study 2 (Forced *Like*), in Study 3 one of the dependent variables in the experiment asked participants to respond to the statement "The postings by Destination Fun Travel seem Human-like." Responses were entered on a 7-point Likert-type scale anchored by Strongly Disagree and Strongly Agree. Results ranged from 2 to 7, (M=4.29, SD=1.33).

Unexpectedly, and in contrast to Study 2 (Forced *Like*), individuals exposed to the two in-group conditions had lower mean scores related to the anthropomorphism of the businesses comments (M=4.10, SD=1.28) whereas subjects experiencing the two out-group conditions (M=4.46 and SD=1.35) presented higher perceptions anthropomorphism. The highest scoring response condition came from the out-group (not *Liked*) high social (M=4.52, SD=1.19) and the out-group low social condition (M=4.41, SD=1.51) while the in-group high social communication condition (M=4.27, SD=1.32) and the in-group low social communication condition (M=3.94, SD=1.25) were the lower set of perceived human-like values.
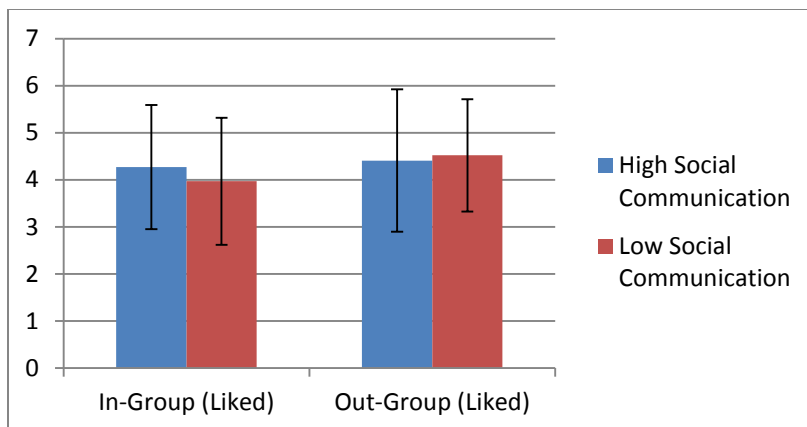
Figure 13. Study 3, Hypothesis 2, Means with Standard Error bars

A two way ANOVA including the independent variables of group status and the level of social communication was used. There was no main effect for group status ($F(1,149)$ =-1.65, p=.10) and no main effect for social communication ($F(1,149)$ =-.5 , p=.61). The results did not reveal a significant interaction ($F(1,149)$ =-1.04 , p=.30).

Other Results related to Hypothesis 2 in Study 3: Gender

Figure 14. Study 3, Contrast for Gender 1

ANOVA was also used to determine the potential impact of gender along with group status and level of social communication as independent variables with the likelihood to anthropomorphize remaining the dependent variable. A significant difference was found using Students t with relation to group status and the difference was explored using the contrast portion of LS Means Differences Tukey HSD in JMP. It was found that males experiencing the low social communication differed significantly based on in-group or out-group status ($F(1,141) =$ 5.03, p=.026) but it was the out-group individuals, who were not asked to *Like* the firm, who scored significantly higher on the anthropomorphism scale.

Other Results related to Hypothesis 2 in Study 3: Number of Facebook Friends

To try to fully explain the results for H_2 in Study 3 an additional independent variable was considered. The number of Facebook *Friends* was also considered with group status and the dependent variable of human-like. Subjects were asked about the number Facebook *Friends* connected to at the time of the survey. The range was a low of 9 to a high of 2000 with a (M=533, SD= 312). The data was recoded into quartiles resulting in a lower quartile up to 300, a second quartile up to 473, a third quartile up to 736 and the remaining values up to 2000. Although the number of *Friends* was not found to significantly influence the overall measure $F(3, 139)$ =1.21, p=.39, Students t did show significant differences between some of the quartiles. The in-group individuals within the lowest quartile of Facebook *Friends* (i.e. 9 to 300) were significantly different ($F(1, 139)$ =4.41, p=.03) compared to out-group responses from individuals within the 2nd quartile of number of *Friends* (i.e. 301 to 473). Although these results do not provide support for the original hypothesis the fact that the in-group individuals within the lowest quartile of Facebook *Friends* (i.e. 9 to 300) were much less likely to anthropomorphize

the Facebook page than out-group individuals did seem to suggest the relationship between

group status and anthropomorphism within an online social network is worthy of further study.

Level	Least Sq Mean
Out Group,2 A	4.6500000
Out Group,3 A B	4.5789474
Out Group,4 A B	4.5500000
In Group,4 A B	4.4705882
In Group,3 A B	4.4210526
Out Group,1 A B	4.2631579
In Group,2 A B	3.8461538
In Group,1 B	3.8000000

Levels not connected by same letter are significantly differ

▼Contrast

▷ Test Detail

SS	NumDF	DenDF	F Ratio	Prob > F
7.225	1	139	4.4129	0.0375*

Figure 15. Study 3, Contrast for number of Facebook *Friends*

Study 3: Results for Hypotheses 3

Hypothesis 3 (H₃): Subjects who anthropomorphize organizations within online social networks will be more willing to engage in word-of-mouth communication.

It was expected that the subjects who were more likely to perceive a business as human-

like (i.e. anthropomorphize) would be more willing to engage in word-of-mouth communication

related to the firm. Subject's willingness to engage in word-of-mouth communication related to

the company's Facebook page was measured using the question: "How likely would you be to

share the information from the Destination Fun Travel Facebook page with a friend?" on a 7-

point Likert scale. A review of all responses to all conditions revealed $M=3.09$, $SD=1.54$ that

participants were solidly in the "somewhat disagree" portion of the scale related to the likelihood

they would participate in word-of-mouth communication related to the businesses Facebook. The

mean result was, however, higher in Study 2 (Forced *Like*).

To measure the perception of anthropomorphism of the business subjects were asked to provide a level of agreement with the statement: "The postings by Destination Fun Travel seem human-like." Responses to this variable yielded a result M=4.29 SD=1.33 suggesting that individuals were generally neutral as to anthropomorphizing the business.

Pearson's correlation was used to evaluate potential relationships between the variables. As predicted, individuals who were more likely to perceive the Facebook communications of the business as human-like were also more likely $r(153)$ =+.55, p<.0001 to be willing to pass on specific information from the Facebook page to a *Friend*.

Because the distribution for the responses to the question related to the likelihood of word-of-mouth communication was not completely normal Spearman's ρ correlation was also conducted. Spearman's ρ correlation $r(153)$ =+.42, *p*<.0001 also produced a statistically significant strong positive correlation. The strong positive correlations provide support for H_3.

Study 3: Results for Hypothesis 4

Hypothesis 4 (H_4): Increase in positive social communication within a group that exists in an online social network will be lead to increased trust of the organization by in-group individuals.

H_4 predicted increased social connectedness between in-group individuals and the organization would improve subject's willingness to trust the organization. The hypothesis was tested by having subjects experience a low level or a high level of positive social communication and then asking subjects to rate whether the statements posted by Destination Fun Travel on the Facebook were trustworthy. The combined results for all conditions showed subjects essentially neutral (M=4.06, SD=1.31) on the 7-point Likert-type scale related to whether the statements posted by Destination Fun Travel on the Facebook were trustworthy. Unexpectedly, and in

contrast to the results from Study 2 (Forced *Like*), individuals experiencing the two high level conditions of social communication responded with lower scores (*M*=4.03, *SD*=1.48) related to trustworthiness of the firm than individuals experiencing the two low levels of social communication (*M*=4.08, *SD*=1.14). Although the difference between the two sets of means was very small the overall results were much different than the results from Study 2 (Forced *Like*). In Study 2 (Forced *Like*) there was an almost one point gap between the two means representing the low and high levels of positive social communication.
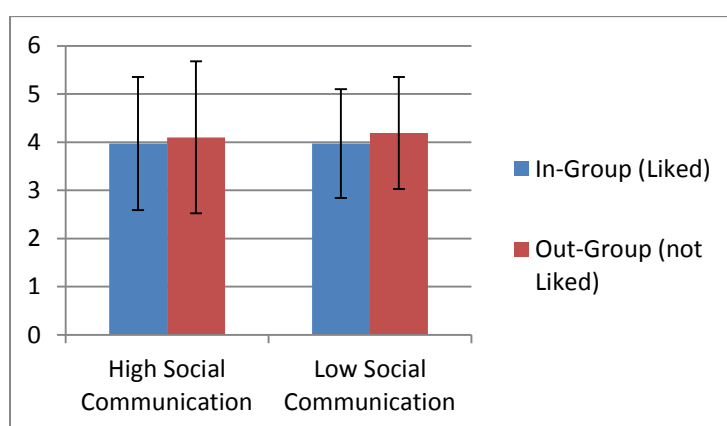
Figure 16. Study 3, Hypothesis 4, Means with Standard Error bars

A two-way ANOVA was used to analyze for an interaction or main effects involving the independent variables of level of social communication and group status along with the dependent variable of the trustworthiness question. No interaction was found (F(1, 153) =.0009, p=.97). A main effect was not found for the level of social communication F(1, 153) =.20, p=.64) and so there did not seem to be any significant relationship to the level of social communication and the level of trustworthiness perceived by subjects in the sample. There was no main effect (F(1, 153) =1.09, p=.29) for group status in Study 3.

H$_4$ predicted increased positive social communication within an online social network would improve subject's willingness to trust the organization but a relationship was not found in Study 3.

These results are at odds with the statistically significant relationship found in Study 2 (Forced *Like*) using the same "level of social communication variable." The operationalization of the other independent variable of group status was different in Study 3 compared with Study 2 (Forced *Like*) but it is unknown if that change played a role in the change of results for H$_4$ in Study 3.

Several post hoc analyses were conducted to investigate possible reasons for the change. The variables of gender ($F(1,149) =.01$, $p=.91$) and marital status ($F(1,149) =.23$, $p=.62$) were scrutinized with no significant relationship to dependent variable of trust. The number of Facebook *Friends* was also considered as a possible influence. Subjects were categorized as having a high number of *Friends* if they were above the median of 491 *friends* and low number of friends if they had less than 491 *Friends*. No significant ($F(1,149) =.15$, $p=.69$) relationship was found between the number of *Friends* and the level of trust of the organization Destination Fun Travel. Ethnicity was also considered with no significant ($F(1,151) =1.10$, $p=.35$) although a contrast of Hispanics with Black/ African American subjects in Study 3 did show a statistically insignificant but interesting result of ($F(1,149) =1.75$, $p=.18$).

Another type of post hoc examination was done using answers subjects provided in a non-experimental section of Study 3. Prior to being exposed to the experimental conditions, subjects were asked how likely they would be to trust certain types of communication using a 7-point Likert-type scale with "Very Unlikely" and "Very Likely" as the anchors. The question and responses in Study 3 were as follows:

"How likely would you be to trust information from each of the following sources"	Mean	Standard Deviation
Recommendations for a product from a person you know	5.21	1.34
Recommendations for a product from a billboard	3.36	1.27
Recommendations for a product from a TV commercial	3.57	1.31
Recommendations for a product from a friend within Facebook	4.41	1.26
Recommendations for a product from a company you have "liked" within Facebook	3.88	1.33
Recommendations for a product from a magazine advertisement	3.65	1.32
Recommendations for a product shown in a movie	3.55	1.40

Table 2. Study 3, Subjects scoring for likelihood to trust different communication types

The scores obtained in the experimental portion of Study 3 condition resulted in a trust response level (M=4.06, SD=1.31) above what the same group of individuals stated they would provide for a company *Liked* on Facebook. Because the firm in the experiment was completely fictional and could have no prior associations with the participants these exploratory results are worthy of investigation and may suggest participants underestimate the level of trust they have for organizations *Liked* on Facebook.

Study 3: Results for Hypothesis 5

Hypothesis 5 (H_5): Increase in the level of social connectedness between an individual and an organization within an online social network will cause an increase in the willingness to engage in word-of-mouth communication.

Increased social connection between an individual and an organization in terms of in-group versus out-group status was expected to generate an increased interest in word-of-mouth communication. Social connection was operationalized by asking in-group subjects to imagine *Liking* the Facebook page of a business whereas out-group individuals were not asked to imagine

Liking the businesses page. Willingness to generate word-of-mouth communication served as the dependent variable using the same question as in Study 2 (Forced *Like*). Subject's responses showed participants were "somewhat unlikely" (*M*=3.06, *SD*=1.55) to be willing to generate word-of-mouth communication related to the businesses Facebook page. The highest scoring responses came from the in-group high social communication group (*M*=3.43, *SD*=1.64) while the in-group low social communication condition was second highest (*M*=3.15, *SD*=1.66). Both out-group conditions were lower than the in-group conditions with the out-group high social communication condition scoring (*M*=2.94, *SD*=1.50) and the out-group low social condition at (*M*=2.75, *SD*=1.39).
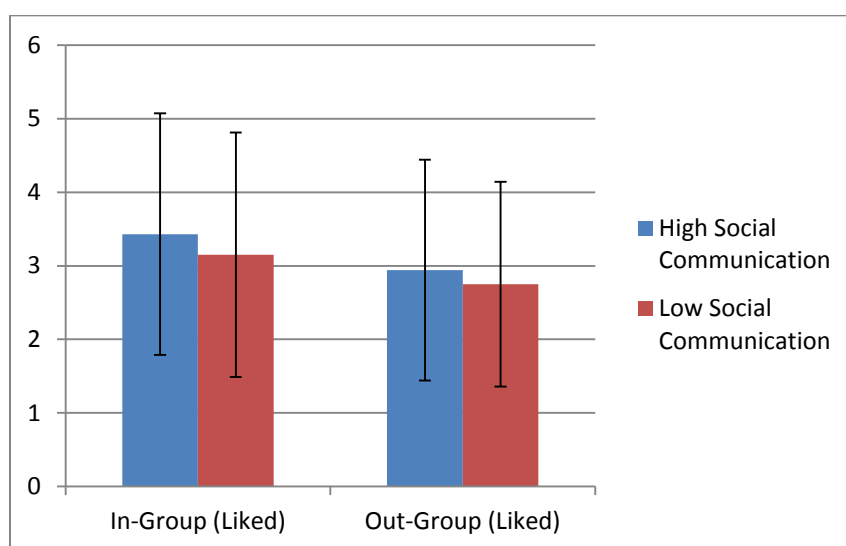
Figure 17. Study 3, Hypothesis 5, Means with Standard Error bars

A two-way ANOVA was used to test for main effects and the independent variable of social communication was included to determine if there were interactions between the variables. No interaction was found (*F*(1, 151) = 0.025, p=.87). The level of social communication did not produce a main effect (*F*(1, 151) = 0.91, p=.34) and was not significant.

Group status did not create a statistically significant effect at the 95% confidence level $(F(1, 151) = 3.16, p=.07)$.

Support for H_5 was not found because increases in the level of social connection (group status) did not produce increases in willingness of individuals to participate in word-of-mouth communication at a statistical significant level.

Study 3: Results for Hypothesis 6

Hypothesis 6 (H_6): Subjects scoring higher on the adjusted Hughes et al. (2004) loneliness index will be more prone to anthropomorphize organizations within online social networks.

Based on results from Epley et al. (2007) it was expected that individuals propensity to anthropomorphize a business in Facebook would correlate to the scores on the Hughes et al. (2004) loneliness measure. The three questions from the Hughes et al. (2004) loneliness scale were measure on a 3-item scale (i.e. Hardly ever, Some of the time, Often).

A comparison of responses to the three Hughes et al. (2004) loneliness questions using Chronbach's α produced a result of .80 and so the three questions were averaged into a single loneliness variable. When all subjects completing the experimental conditions were considered the responses in Study 3 produced similar levels of feelings of loneliness (M=1.49), SD=.51) as in Study 2 (Forced *Like*).

Likelihood to anthropomorphize was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Across all conditions subjects perceptions of the business as human-like on the 7-point scale (M=4.25, SD=1.37) showed that individuals in the study were more likely to remain neutral or anthropomorphize the site than to not anthropomorphize. These results were also similar to the results from Study 2 (Forced *Like*).

Spearman's *rho* correlation was used to examine a potential relationship between the combined loneliness measure and the likelihood subjects would anthropomorphize the business. Different from Study 2 (Forced *Like*), and against predictions, no significant correlation was found $r(154) =-.09$, $p=.24$. Although the means for most measures were similar the correlation analysis shows that in Study 3 individual's propensity to feel lonely is not correlated with the likelihood to anthropomorphize the business in Facebook.

Study 3: Hypothesis 7 results

> *Hypothesis 7 (H_7)*: Subjects scoring higher on the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence will be more prone to anthropomorphize organizations within online social networks.

Twelve questions related to interpersonal relationships, branding, and word-of-mouth communication came were sourced from the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence. Each statement was presented using a 7-point Likert-type scale anchored by "Strong Disagree" and "Strongly Agree." It was predicted that subjects scoring higher on the Bearden et al. (1989) measures would be more prone to anthropomorphize organizations within online social networks.

Correlation analysis of the twelve questions from Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence resulted in a Cronbach's alpha of .86 and so the questions were averaged into a single variable for analysis. The resulting single measure produced (M=3.61, SD=1.00) suggesting that, overall, individuals did not feel a need to purchase specific products to fit in and did not try to buy certain products to be like others.

Likelihood to anthropomorphize was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored

by "Strongly Agree" and "Strongly Disagree." Combined results from all participant's perceptions of the firm as human-like resulted in (*M*=4.25 *SD*=1.37).

Correlation analysis using Spearman's ρ resulted in r(154) =+.26, p=.0009 confirming that changes in the need for interpersonal influence did correspond to changes in the likelihood that an individual in the study would anthropomorphize the business within Facebook.

To complete further analysis, the highest scoring (M=5.21, SD=1.54) question from Bearden et al. (1989): "If I have little experience with a product, I often ask my friends about the product." was compared, by itself, with the human-like variable. Spearman's ρ produced a result of r(154) =+.27, p=.0006.

These results confirm that individuals in the study who do have a higher need for interpersonal influence also are more likely to anthropomorphize a business within an online social network. There is strong support for H$_7$.

Study 3: Results for Hypotheses 8

Hypothesis 8 (H$_8$): A higher need for behavior cues in social situations will be associated with an increasing level of anthropomorphism of organizations within online social networks.

Social interaction and social approval were important concepts within the current study and so responses by participants regarding the need for behavior cues in uncertain social situations was of interest. Responses were obtained using a 7-point Likert-type scale anchored by "Strongly Disagree" and "Strongly Agree." The combined responses was for all participants was (*M*=4.16, SD=1.67) signifying that respondents were neutral concerning their need for behavior cues.

Likelihood to anthropomorphize was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Results from all participant's perceptions of the firm as human-like (M=4.24 SD=1.37) showed that individuals in the study were essentially neutral concerning their likelihood to anthropomorphize the business.

Correlation analysis using Spearman's *rho* Pearson's r(154) =.04, p=.59 did not produce a significant result suggesting that individuals' need for behavior cues was not associated with the likelihood to anthropomorphize the firm. Therefore, support was not found for H_8.

Study 3: Results for Hypothesis 9

Hypothesis 9 (H_9): The level of trust subjects have for companies *Liked* on Facebook prior to the study will correlate to the level the subject anthropomorphizes the company in the current study.

It was expected that trust might serve as a type of proxy for group status and that individuals with a high level of trust of organizations previously *Liked* on Facebook would correlate to high levels of anthropomorphic response to the business in the current study. Subjects were asked if they had ever *Liked* a company on Facebook before. The 120 participants who responded as having *Liked* firms in the past were asked how many firms had been *Liked* and 96 subjects provided a specific number of previously *Liked* firms. The results (M=12.14, SD=17.24) showed the typical respondent had *Liked* about twelve firms prior to the study with the overall responses including a low of 1 and a high of 100 firms *Liked*. Individuals who acknowledged that they had *Liked* at least one firm in the past were asked to respond to the statement "I trust the companies I have 'Liked' in Facebook" using a 7-point Likert-type scale anchored by "Strongly Disagree" and "Strongly Agree." The overall response from the 120

participants who stated they had Liked firms in Facebook before was that they "Somewhat Agreed" (M=5.06, SD=1.38) to trusting the companies.

The self-reported likelihood subjects would anthropomorphize the business shown on the Facebook page was measured on a 7-point Likert-type scale using the statement "The postings by Destination Fun Travel seem human-like" with responses anchored by "Strongly Agree" and "Strongly Disagree." Results from all participant's perceptions of the firm as human-like (M=4.25 SD=1.39) showed that individuals in the study were neutral as to the likelihood to anthropomorphize the firm.

Spearman's ρ correlation was used to evaluate potential relationships between the variables. The level of trust individuals reported for companies they had previously *Liked* on Facebook showed a significant correlation r(123) =+.22, p=.01 to individuals likelihood to anthropomorphizing the firm in the current study. Therefore, support was found for H_9.

Additional Comments and Post Hoc considerations related to Results

The same measures were utilized for statistical documentations of several hypotheses. Thus, the Bonferroni correct approach was considered to address potential concerns with control for Type I error (α<.05 served as an acceptance criterion for significance in this study) by dividing α by *k* (Curtain et al, 1998).

Hypothesis 2 and *(H_8)* both utilized the dependent variable of "The postings by Destination Fun Travel seem Human-like." However, neither *(H_2) or (H_8)* were supported in either study therefore post hoc analysis was not necessary.

(H_3) and *(H_5)* used the same dependent measure of the likelihood the subject would be willing to pass information from the firm on to a friend (i.e. word-of-mouth communication).

(H₃) was supported in both Study 2 (Forced *Like*) and Study 3. However, even if the conservative Bonferroni post hoc analysis correction is applied to the significance level of *(H₃)* (.05/2 = .025) the results remain significant in both Study 2 (Forced *Like*) $r(39) = .81$, $p < .0001$ and Study 3 $r(153) = +.55$, $p < .0001$.

Prior to post hoc analysis *(H₅)* was supported in Study 2 (Forced *Like*) $(F(1, 35) = 4.06, p = .05)$ while the results did not show a significant difference in Study 3 $(F(1, 151) = 3.16, p = .07)$. When the conservative post hoc Bonferroni analysis was applied to the results in Study 2 (Forced *Like*) (.05/2 = .025) the results from *(H₅)* Study 2 (Forced *Like*) were not significant. Therefore *(H₅)* was not supported in either study.

Study 2 Hypotheses	Results
Hypothesis 1 (H₁): Social interactivity between organizations and others within online social networks will create a priming effect and elicit social responses from subjects.	Supported
Hypothesis 2 (H₂): *Liking* an organization within Facebook will lead to an increase in anthropomorphism of the organization.	Not Supported
Hypothesis 3 (H₃): Subjects who anthropomorphize organizations within online social networks will be more willing to engage in word-of-mouth communication.	Supported
Hypothesis 4 (H₄): Increases in positive social communication within a group that exists in an online social network will be lead to increased trust of the organization by in-group individuals.	Supported
Hypothesis 5 (H₅): Increases in the level of social connectedness between an individual and an organization within an online social network will cause an increase in the willingness to engage in word-of-mouth communication.	Not Supported
Hypothesis 6 (H₆): Subjects scoring higher on the adjusted Hughes (2004) loneliness index will be more prone to anthropomorphize organizations within online social networks.	Supported
Hypothesis 7 (H₇): Subjects scoring higher on the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence will be more prone to anthropomorphize organizations within online social networks.	Not Supported
Hypothesis 8 (H₈): A higher need for behavior cues in social situations will be associated with an increasing level of anthropomorphism of organizations within online social networks.	Supported
Hypothesis 9 (H₉): The level of trust subjects have for companies *Liked* on Facebook prior to the study will correlate to the level the subject anthropomorphizes the company in the current study.	Not Supported

Table 3. Summary of Hypotheses test results for Study 2 (Forced *Like*)

Study 3 Hypotheses	Results
Hypothesis 1 (H₁): Social interactivity between organizations and others within online social networks will create a priming effect and elicit social responses from subjects.	Not Supported
Hypothesis 2 (H₂): *Liking* an organization within Facebook will lead to an increase in anthropomorphism of the organization.	Not Supported
Hypothesis 3 (H₃): Subjects who anthropomorphize organizations within online social networks will be more willing to engage in word-of-mouth communication.	Supported
Hypothesis 4 (H₄): Increases in positive social communication within a group that exists in an online social network will be lead to increased trust of the organization by in-group individuals.	Not Supported
Hypothesis 5 (H₅): Increases in the level of social connectedness between an individual and an organization within an online social network will cause an increase in the willingness to engage in word-of-mouth communication.	Not Supported
Hypothesis 6 (H₆): Subjects scoring higher on the adjusted Hughes (2004) loneliness index will be more prone to anthropomorphize organizations within online social networks.	Not Supported
Hypothesis 7 (H₇): Subjects scoring higher on the Bearden, Netemeyer and Teel (1989) Measurement of Interpersonal Influence will be more prone to anthropomorphize organizations within online social networks.	Supported
Hypothesis 8 (H₈): *Hypothesis 8 (H₈)*: A higher need for behavior cues in social situations will be associated with an increasing level of anthropomorphism of organizations within online social networks.	Not Supported
Hypothesis 9 (H₉): The level of trust subjects have for companies *Liked* on Facebook prior to the study will correlate to the level the subject anthropomorphizes the company in the current study.	Supported

Table 4. Summary of Hypotheses test results for Study 3

`Study 4: Content analysis Results

Rainie, Smith, and Duggan (2013) noted that **"**Two-thirds of online American adults (67%)" are using Facebook and the resulting volume of information posted on the site can be staggering. For example, during this exploratory unobtrusive ethnographic study it was found that the simple two sentence posting by Target on December 30, 2012: "Thumbs it up to the best of 2012. What's your favorite memory from the past year?" generated nearly 2,000 comments by individuals along with 6,163 *Likes* and 93 *Shares*.

Thousands of Facebook *Postings* were viewed for this research but most of the comments that were viewed were inconsequential. Even so, a variety of interesting exploratory results were found related to the hypotheses proposed in this study. Although not significant statistically, the results do seem to warrant further investigation. Using the coding described in the Content analysis Design section a variety of illustrative examples were culled from the thousands of comments posted on the OXO, Target and Method Facebook *Pages*. Two examples of dyadic communication between individuals and a firm of the types of social communication that were analyzed can be viewed in APPENDIX 8 and are from the kitchen and household appliance firm OXO.

Anthropomorphism related to elicited agent knowledge

(H₂) suggested that "*Liking* an organization within Facebook will lead to an increase in anthropomorphism of the organization." Based on findings during the content analysis there seems to be at least some type of relationship related to individuals connecting themselves to a firm and then anthropomorphizing the firm.

It seems likely that most adult Facebook users cognitively understand OXO, Target, and Method are corporations and not people. It was, however, relatively easy to document the propensity for users to communicate with the organizations in human-like terms directly and to refer to organizations in human-like terms in comments to others. Brief comments such as Caitlin Tull's June 7, 2012 note: "Thank you Method" as a response to a *Wall* posting by Method, on the same day, display human-like communication that is different than what is expected from a customer viewing other forms of corporate communication. *Postings* such as Caitlin Tull's represent a small percentage of overall Facebook communication but were relatively easy to find on the sites observed during the content analysis. The human communications did seem to illustrate individuals conforming to the social nature of the Facebook platform by including organizations in their social responses. Few anthropomorphic responses seemed more related to elicited agent knowledge than the *Postings* related to the "birthday" of the company Method. When the firm celebrated its' founding with a *Posting* on its' Facebook *Wall* it resulted in 853 people *Liking* Method's own birthday wish *Posting*. In fact, 63 individuals replied with comments. The happy birthday comments ranged from a number of simple "Happy Birthday" statements to slightly more anthropomorphic responses like that of Mary Warner who wrote "Congrats! You made a difference! Be Proud!..." Although Ms. Warner's comments that Method should be proud of itself did not reveal the full extent of perceptions of Method the wording does seem to attribute human-like characteristics onto the firm. Other birthday statements seemed to illustrate even more complicated theories such as the comment from KC Witherspoon who wrote: "Thank you Method…for giving those of us who really care about animals and the earth some really cool looking and effective products we can feel good about using!!!! Love U!!!!!" which seemed to illustrate the personality impressions

described by Marcus et al. (2006). Furthermore, the posting by KC Witherspoon was the only posting of the 63 postings to receive more than two *Likes* by other users which illustrates the need for future research into the social motivation aspects of anthropomorphism within online social networks.

Anthropomorphic responses related to effectance motivation

Postings by Facebook users which were addressed to organizations also created a theme related to a generalized interpretation of effectance motivation. This theme was interpreted as relevant to *(H8)* and *(H9)* which, respectively, suggested that a need for behavior cues would increase anthropomorphism and that greater trust in a firm will lead to more anthropomorphism of the firm. In the case of the unobtrusive ethnographic analysis of Facebook communications the messages in this theme sometimes took on more practical concerns related to topics such as the organizations basic services. Facebook users connected to the particular firms seemed almost anxious to confirm their needs of the organization. For example, Deborah Ruiz's posting related to her interest in interacting with the firm during an upcoming sale:

> "Target, has your EMarketing team talked to your IT team…about how popular this designer is and how people WILL be online first thing Feb 5th? Or is ordering online going to be an excruciating process like it was for your Missoni launch? There was definitely a failure to communicate last time…I hope they are ready for this round!"

Postings written using language addressing a firm as a person even drifted into mundane topics such as Jeff Millers' posting in December 2012 about the hours of operation for Target: "Hey Target, why aren't you open 24 hrs this close to christmas? Waiting for 8am opening and walmart didn't have what I needed."

A number of the responses related to the anthropomorphic effectance motivation theme required analysis of a series of postings. An example of a product related communication exchange came in response to an OXO posting about a feather duster. A user named Kathleen

Nelson asked: "Does the red part come off for Washing? Is the red part replaceable?" and received a reply from OXO stating: "Hi Kathleen, yes, the microfiber unsnaps and is machine washable. We also sell replacement Duster heads." In this scenario the original posting about the feather duster lead to Kathleen Nelson's comments but an additional query came as a follow up to the 2nd OXO posting. Candy Semenuk asked OXO: "where can I buy it? I clean houses for a living & always have to throw them out for getting dirty." An image of these interactions is visible in APPENDIX 10. In this case the person read OXO's comment and responded with a query about purchasing the product. Overall, the anthropomorphic responses related to the effectance motivation theme seemed to illustrate enough examples to support additional exploration of (H_8) and (H_9) in future studies.

Anthropomorphic responses involving social motivation

Communication exchange on Facebook also included social interactions which seem to represent a form of anthropomorphic behavior and relate to (H_1). In an interesting example on the OXO Facebook *Page* a woman named Victoria Fabrizio Trinanes posted a question to OXO in response to an OXO posting about a new style of laundry hamper (See APPENDIX 9.). Victoria asked: "Does it fold and put away?" and received four *Likes* from other Facebook users. On the same day OXO responded with the comment: "Hi Victoria, the Hamper is indeed collapsible! For more info, please visit: http://bit.ly/XYtRp9" and included a photo of the hamper and an additional hyperlink. The interesting part of the dialogue that seemed to be anthropomorphic in a socially motivated manner came later in the same day when Caryn McDaniel Broomby posted a note to OXO and wrote: "I think Victoria was asking if it folds the laundry, oxo!!" These interactions seemed to take social motivation to another level because the individual human users were willing to provide the social cues *to the firm* creating an odd twist

in terms of anthropomorphism. That is, the individuals seemed to be trying to help OXO understand the joke. Caryn McDaniel Broomby's posting received 11 *Likes* from other users who seemingly want to participate in the interaction with Ms. Broomsby, OXO and the others viewing the OXO Facebook *Wall*. These examples, although exploratory, seem to lend enough support to (H_1) to suggest future study.

Word-of-mouth communication—General comments and self-disclosure comments

Facebook users have the ability to quickly post comments to the online social network from a variety of traditional computing and mobile technology devices. In many cases a frenzy of communication activity takes place. This social interactivity between Facebook users and firms posting information on Facebook seemed illustrative of the concept proposed by (H_1). That is, social interactivity between organizations and users within Facebook seemed to initiate social responses from users.

Users can post original comments as *Posts*, respond to other individuals and respond to organizations. Additionally, users that see information posted by others or organizations can use the *Share* option to engage in word-of-mouth communication. Many of the word-of-mouth communication examples found during the unobtrusive content analysis might seem banal to the casual observer but were of importance for this exploratory research. Many comments that were responses to a firm's posting seemed to be motivated by an individual's need for self-disclosure although it was typically unclear if the disclosure was directed at the firm, other Facebook users or both. For example, OXO posted the photo and comments shown in Figure 18 and received over 100 responses. One of the responses came from David Dale Kush's on October 26, 2012 when he wrote: "I like drinks." Another, from Paul Leventhal, also on October 26, 2012 was "i'm happy now." It was unclear if Mr. Kush and Mr. Leventhal were directing their self-

disclosure at OXO, the other individuals who had *Posted* comments previously or some combination. At a minimum, Mr. Kush and Mr. Leventhal's responses seemed to fit Ledbetter et al.'s (2011) comments on self-disclosure in online social networks but could also be related to the overall concept of anthropomorphically initiated word-of-mouth communication explored in this research.

Figure 18. OXO posting preceding self-disclosure.

Self-disclosure related word-of-mouth marketing also occurred via the *Sharing* tool with Facebook. The posting shown in Figure 19 was on the Target Facebook page and obtained almost 4,000 *Likes* and had 72 *Comments.* Also, relevant to the concept of word-of-mouth marketing is the number of individuals who *Shared* this posting (81) so it would be viewed throughout their own Facebook network of *Friends*. This type of self-disclosure to in-group

individuals within Facebook users' own group of *Friends* seems related to self-disclosure and in-group status. Additionally, because these types of *Sharing* include Target as a *Liked* in-group status member the *Sharing* may also be related to the research by Yoo (2008) related to unconscious consideration of brands.
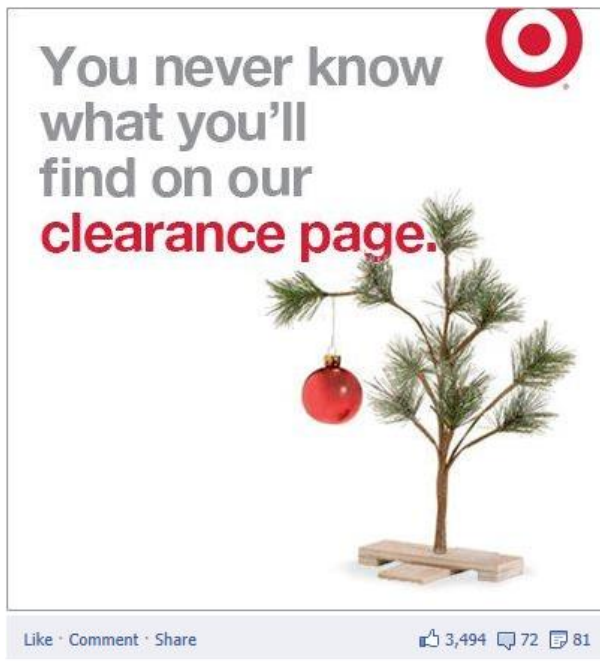
Figure 19. Example of Target initiated *Sharing*

Word-of-mouth communication—Related to Trust

In this research, *(H₄)* related to the prediction that increases of in-group social communication in online social networks would lead to increased trust by in-group individuals. Although this exploratory content analysis was not able to show actual cause and effect between those variables there were examples of what appeared to be that type of relationship. In some cases the amount individuals wrote seemed to a proxy for the level of engagement or even trust they had for the organization. During the content analysis Facebook users typically seemed to

voice their trust of an organization or concept in terms of love. For example, in early March of

2012 an individual posting on the Method Facebook *Page* seemed to illustrate trust based word-

of-mouth communication effectively with a posting that was *Liked* by 35 individuals:

> ""i am in *love* with your method all-purpose natural surface cleaner! not only does it
> clean really well, but the french lavender scent makes me want to clean the whole world.
> it is the best all-around cleaning product ever. i just wanted to say 'thanks' to whoever is
> responsible for making it a reality (would it be weird to use it as an after-shave, breath
> spray, or to spray it on my sheets every night? just kidding – but that's how much I like
> the scent). keep up the good work, method team! you've got a big fan here."

Postings on the OXO site show a similar level of inter-connected word-of-mouth communication

including Sami Cullenz's response in which she *Tagged* a *Friend* (Elena) in her posting and then

the friend *Liked* the post. Because this word-of-mouth communication was taking place on the

Figure 20. OXO example of eWOM based on Trust

OXO *Wall* it wasn't just a communication between two people but rather a communication

taking place in full view of thousands of users. Additionally, it is worth noting the possible

connections between anthropomorphism and word-of-mouth communication in relation to this

example. That is, Sami's posting followed the *Posting* by OXO in which an individual user

(Nancy) was *Tagged* by OXO. The existence of Sami's very personalized posting as a follow up to the personalized OXO posting does not prove (H_3) or (H_5) but may help clarify questions related to anthropomorphism, social connection, and word-of-mouth communication.

Discussion of results for Study 2 (Forced *Like*) and Study 3

The goals and methods for Study 2 (Forced *Like*) and Study 3 were very similar. The sample size was larger in Study 3 and the way group status was operationalized was slightly different. Overall, more support was found for the proposed hypotheses than not and the results between the two studies were consistent for several hypotheses. For example, H3 and H5 were supported in both studies. There were, however, a number of noteworthy differences in the results between the two studies with some hypotheses supported in one study but not the other.

The goal was to determine if group status and the level of social communication within a firm's Facebook page would play a role in anthropomorphism and word-of-mouth communication. Additionally, the potential impact of trust, interpersonal influence, credibility, loneliness, and behavioral cues in social situations were considered important. Results were mixed. In Study 2 (Forced *Like*) support was found for all proposed hypotheses with the exceptions of H_2 and H_7. In Study 3 support was found for H3, H7 and H9.

Epley, et al.'s (2007) concept of Elicited Agent Knowledge suggests that humans only know what it is like to be human and since back-and-forth communication within an online social network is typically a human activity it was expected that a higher level of positive social communication displayed on a firm's Facebook page would be more likely to increase the likelihood subjects would perceive the organization as social than a low level of social communication. H_1 was supported in Study 2 (Forced *Like*) and was a useful step in considering a model of word-of-mouth marketing that is initiated by a firm. However, H_1 was but not in

Study 3. In simple terms, the lack of effect in Study 3 was due to the relatively equal scoring of the Facebook pages perceived sociality between the two conditions. But, the reason for the similar perceptions of socialness was not fully clear. Although other factors were considered post hoc, including gender, marital status, the number of Facebook *Friends* and ethnicity, none of those other variables appeared significant. It could be that the larger sample size in Study 3 showed the true nature of the population but given the significant support found for H_1 in Study 2 (Forced *Like*) are in contrast but without complete explanation as to why.

It was expected that subjects who were asked to *Like* a Facebook *page* would gain a sense of in-group status and thereby be more likely to anthropomorphize the business. Support was not found in either Study 2 (Forced *Like*) or Study 3. It may be that there really is a lack of causal relationship between in-group status and anthropomorphism. However, it may be possible that in-group status does play a role but was not operationalized in this study in a way that replicates true in-group status. Based on Reeves and Nass (1996) findings that humans would anthropomorphize computers who were considered team members and on research into the importance of group status, such as Wyer's (2010) findings, it seemed likely that individuals placed into a group with an organization would more likely to anthropomorphize the organization. Although this line of thinking was sensible and supported by previous research it was not supported quantitatively in Study 2 (Forced *Like*). In fact, as it was operationalized in this study, group status did not seem to directly cause anthropomorphic sentiments. Reeves and Nass (1996) findings did show a distinct difference between individuals who perceived in-group status and those who did not. Those who did not perceive in-group status (i.e. being on a team) did not anthropomorphize the media with which they interacted. In Study 2 (Forced *Like*), the manipulation check using the question of "How strong of a connection do you feel to Destination

Fun Travel?" showed the operationalization of the independent variable did not seem to manipulate group status as hoped. The true reason no significant relationship was found between group status and anthropomorphism cannot be known. It could be that no relationship exists in the population. That said, the manipulation check in the current study suggests that the independent variable was not operationalized to the extent required to make a true sense of in-group status occur and this lack of operationalization seems to be one possible reason for the lack of effect.

Although the level of anthropomorphism was not effectively manipulated by in-group status in Study 2 (Forced *Like*) there was still a level of anthropomorphic response by subjects. Furthermore, subjects who did anthropomorphize were also more likely to engaging in word-of-mouth communication than those who did not anthropomorphize. This seems to show some subjects making a conscious consideration of the site as human-like and reacting to the site with a social response. Although a correlation was determined to exist, the specific reason(s) for the correlation can only be conjectured. Given that the subjects in the study were reviewing Facebook comments from individuals and a company that do not really exist there should be no influences related to brand. It may be that the likelihood to engage in word-of-mouth marketing related to the anthropomorphized entity was related to sociality motivation as described by Epley et al.'s (2007). The notion of sociality motivation brings together the ideas of anthropomorphism and humans need to "maintain a sense of social connection with others" simply its own sake.

Pankaj and McGill (2012) used language similar to Reeves and Nass (1996) social response experiments related to teams when describing the impact anthropomorphizing a brand has on the behavior of subjects. H_3 stated the expectation that subjects in this research who did anthropomorphize the business would be also be more willing to engage in word-of-mouth

communication related to the anthropomorphized entity. Because H_3 was supported in both Study 2 (Forced *Like*) and Study 3 it seems plausible that a new type of word-of-mouth communication model could be conceived but without guarantees as to how to create the anthropomorphism of the firm.

Base on literature reviewed it was predicted that a levels of positive social communication would lead to increased trust of the organization. This expectation, represented as H_4, was supported in Study 2 (Forced *Like*) but not Study 3. Post hoc analyses in Study 3 investigated potential relationships between gender, marital status, the number of Facebook *Friends* prior to the study, and ethnicity but none showed a significant relationship to trust in the organization. It could be that the sample in Study 3 was representative of the population. To examine this possibility, more post hoc comparisons were made including comparisons to levels of trust the subjects self-reported having in different forms of marketing communications. The mean score for level of trust in the experiment was actually higher than what subjects stated they would provide for a company *Liked* on Facebook prior to experiment. In fact, the level of trust the subjects rated the firm in the experiment was only lower than the level subjects stated would be afforded to a person known to the subject.

Based on the results it seems mostly likely that an undetermined interaction exists between variables or that the way the group status variable was operationalized played a role. Because the variable was operationalized somewhat differently in Study 3 (i.e. subjects were asked to imagine *Liking* the firm, not actually asked to do so) than in Study 2 (Forced *Like*) it could be that the lack of group status caused the in-group conditions to not reflect what would have happened if the subjects in the in-group conditions had felt a closer connection to the organization. It is unclear if a stronger sense of connection to the group would have created a

different result in terms of trust in Study 3 but given the significant relationship found in Study 2 (Forced *Like*) such a possibility is worth consideration.

The role of group status was of particular interest since both studies found at least some support for the idea that the in-group did seem to cause individuals to be more willing to engage in word-of-mouth communication. Given that the firm and brand were fictional and that group status was forced upon subjects it was useful to find that significant support was still found for H_5 in Study 2 (Forced *Like*) and somewhat significant support was found in Study 3. Along with the results supporting H_3 in both studies the results for H_5 provide additional backing for the concept of a new model of word-of-mouth marketing.

Based on some prior research into loneliness and the anthropomorphism it was expected that individuals who self-reported as lonely would be more likely to anthropomorphize an organization within an online social network. This hypothesis (i.e. H_6) was supported in Study 2 (Forced *Like*) but not in Study 3. No definitive reason was found for the difference in the two sets of results. However, past research results were considered to try to determine possible causes. Epley et al. (2008) and McConnell et al. (2011) found different results related to the impact of loneliness on anthropomorphism. McConnell et al. (2011), used the UCLA Loneliness Scale and not find a relationship between anthropomorphism and loneliness. Epley et al. (2008) used the Hughes et al. (2004) loneliness scale and found a relationship between loneliness and anthropomorphism. Since Study 2 (Forced *Like*) and Study 3 found different results using the same scale other past variables were considered. Epley et al.'s (2008) subjects were undergraduates as with the current studies whereas McConnell et al.'s (2011) research was completed with community members as subjects and so that did not shed light on the current results either. The majority of McConnell et al.'s (2011) participants were female (i.e. 79%) as

were the participants in Study 2 (Forced *Like*) (i.e. 85%) of this project and Study 2 (Forced *Like*) found a correlation between loneliness and anthropomorphism. McConnell et al. (2011) were not able to account for their differences from Epley et al. (2008) and a similar situation arises from the results in Study 3 of this research.

The degree to which a person is influenced by others in consumer decision-making situations was expected to correlate to the likelihood the person would anthropomorphize a business in Facebook. As with several other parts of this research the results were mixed. Study 3 found support for H_7 but Study 2 (Forced *Like*) did not. The precise reason for the difference in the two experiments is unclear and reinforces the exploratory nature of this work and the need for further research. Review of the data from two studies shows subject's mean score on the interpersonal measure was almost a full point lower in Study 2 (Forced *Like*) than in Study 3.

Examinations of the results from H_8 do shed some light on possible reasons for the results from H_7. With H_8 the results were reversed in comparison to H_7. With H_8, it was expected that individuals who look to others for direction in everyday life situations would also look to an organization for guidance if the counsel came within the context of a social environment such as an online social network. This idea was supported in Study 2 (Forced *Like*) but not in Study 3 suggesting that individuals in Study 3 did believe it was important to obtain information from others when engaged in a purchasing decision but did not feel that was the case in the study.

The notion that the individuals in Study 2 (Forced *Like*) were more impacted by general social communication related to a business while individuals in Study 3 were more willing to be influenced by interpersonal influence related to purchasing decision-making makes sense given the results from H_1. When the results from H_1, H_7 and H_8 are looked at together the results show participants in Study 2 (Forced *Like*) were more likely than those in Study 3 to be influenced by

the increased social communication of a general nature but it seems that the individuals in Study 2 (Forced *Like*) saw less of a need for social support related to purchasing decisions than those in Study 3.

H_9 involved the expectation that individual's level of trust for companies they had *Liked* in Facebook prior to the experiment would correlate to their level of likelihood to anthropomorphize Destination Fun Travel in the experiment. Support was found for H_9 in Study 3 but not in Study 2 (Forced *Like*). As with H_7 and H_8, the exact reasons for the different significant results in the two experiments are unknown. However, when H_9 is considered along with H_1, H_7 and H_8 the pattern of Study 2 (Forced *Like*) participants being more influenced generally by social communication and Study 3 participants being more influenced by specific (e.g. purchasing related) communications seems to present a possible reason for the difference in results. Furthermore, this description of the results may illustrate how much of an impact was made on Study 3 by the change in the way the group status variable was operationalized. That is, if the Study 3 participants were more focused on purchasing decision-making then they might have been influenced by the lower level of group status commitment that came with subjects only being asked to imagine they had *Liked* the firm in the Study 3 experiment instead actually clicking on the *Like* button as was done in Study 2 (Forced *Like*).

Discussion of Content analysis results for Study 4

Although quantitative methods dominate much of the research in marketing and related areas, Patterson (2011) determined that quantitative measures were an effective way to investigate an online social networking site such as Facebook. Use of unobtrusive observational content analysis as originally described by Webb et al. (1966) can produce results that appear as

an inventoried listing of examples. Lee (2000) noted that some social scientists use this method to good effect through "saturative instantiation"…or "piling on of examples, as a way of demonstrating the ubiquity, significance and interpenetration of social forms" (p. 8). After reviewing thousands of Facebook postings the results provided here do attempt to show exploratory interpretations of anthropomorphic responses by individuals on Facebook as well as word-of-mouth marketing communications initiated by the firm. Specifically, postings seemed to fit particular themes related to each of the components of anthropomorphism (i.e. elicited agent knowledge, effectance motivation, and sociality motivation) as described Epley et al. (2007). Although exploratory, the unobtrusive observational ethnology findings do seem to highlight word-of-mouth communications in Facebook that are initiated by firms and interpreted anthropomorphically by humans.

CHAPTER 5. CONCLUSIONS

Summary

Previous research has found that anthropomorphism can happen readily given the right conditions. In the case of human beings assigning human-like characteristics to technology or media, two of the necessary conditions seem to be a true sense of in-group status and a sense of socialiality from the media. In the current research, the two quantitative studies found a number of significant results but the results were not consistent across both studies. A possible explanation for the inconsistent results could the difference in the operationalization of the independent variable of group status. In Study 2 (Forced *Like*) subjects experiencing the in-group conditions were asked to *Like* the firm's Facebook age whereas in Study 3 subjects in the in-group conditions were only asked to imagine *Liking* the firm's Facebook page. This difference may have translated into a significantly dissimilar experience for the individuals involved in terms of the likelihood that anthropomorphism would occur.

The relationship between word-of-mouth and anthropomorphism is critical finding in relation to the prediction that an alternate model of electronic word-of-mouth communication may exist within online social networks. The prediction that subjects would be more willing to engage in word-of-mouth communication provided by a firm that has been anthropomorphized was supported in both experimental studies. Additionally, the unobtrusive observational content analysis seemed to provide examples of individuals anthropomorphizing firms while engaging in electronic word-of-mouth communication.

Lessons learned

In addition to the results and discussions previously mentioned several important lessons for future research were obtained. First, there are numerous challenges to creating experimental

conditions, and holding them constant, within the Facebook environment. Second, operationalizing an independent variable related to group status within an online social network requires additional considerations. It may be necessary to use a familiar brand to create a true sense of connection and in-group status. Third, Facebook provides a vast landscape for observational content analysis but can result in data overload during analysis.

Contributions

Unlike previous studies of anthropomorphism of robots, religious icons, products or avatars in virtual worlds, this exploratory research focused on anthropomorphism of organizations within the context of online social networks and the impact on word-of-mouth communication. Additionally, previous research into word-of-mouth marketing and electronic word-of-mouth marketing focused on human beings as the initiators of the communication.

Although this exploratory research could not produce a new model of anthropomorphically driven word-of-mouth communication within online social networks it is hoped that a foundation has been provided for such research in the future. Figure 21 illustrates one potential example of how such a model might take form.

Figure 21. Example of potential model of electronic word-of-mouth communication in an online social network.

Limitations

The work presented involves exploratory research and should be considered an initial

step in determining a new model(s) of anthropomorphically driven electronic word-of-mouth

communication within online social networks.

An experimental study, such as the work undertaken here, involving online social

networking is pitted against an interactive environment that does not remain static, even for one

second. Facebook as entity and as a culture engages in many tactics to thwart experimental

conditions. Given the constantly changing nature of any Facebook page it was impossible to use

existing Facebook pages for multiple conditions related to the variables of interest in this study.

Therefore, the creation of Facebook pages for fictional business was needed to create the

different experimental conditions. However, using fictional firms may have limited the operationalization of the independent variable of group status.

The exploratory unobtrusive observational content analysis used in this project limited the examination some specific components of anthropomorphism and word-of-mouth communication. For example, the potential role of loneliness on anthropomorphism and word-of-mouth communication in online social networks was not undertaken during the content analysis. Future research could include interview based ethnography and follow a group of Facebook users to determine frequency and types of postings, but also motivations for each, to determine if loneliness plays a role in anthropomorphism and/or in word-of-mouth communication on Facebook.

Suggestions for future research

Future research should be focused on continued investigation of a new model of electronic word-of-mouth communication in which the communication is initiated by a firm. A necessary step is determining a more effective operationalization of the independent variable of group status. It may be that a real-life Facebook page needs to be used in a study which may require participants to view the site at the same moment in order to hold conditions the same for all participants.

A consistent finding in the experimental portions of this exploratory research was that subjects who did anthropomorphize the organization were also more likely to engage in word-of-mouth communication related to the organization. To fully develop a new model of electronic word-of-mouth communication it is important to gain a clearer understanding of why individuals responded this way. Providing subjects different scenarios related to the word-of-mouth communication may help determine why anthropomorphism and eWOM were correlated. It is

expected that future research will clarify the potential for firms represented within online social networks to be anthropomorphized and be the initiators of electronic word-of-mouth communication.

Another possible avenue of research, which could expand upon the content analysis, includes creating a software program or using existing software to filter through Facebook postings in search of humorous or emotional expressions by individuals. Analyzing such postings could provide insight into effects related to liking, in-group status and anthropomorphism.

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APPENDIX 1. QUESTIONS FOR 1ˢᵗ EXPLORATORY SURVEY

Some modifications were made to the survey formatting to make it possible to display the online survey questions within this document.

1) What is your age: _____

2) Are you ___Male or ___Female

3) Please check all the social media applications you use at least 30 minutes per week

    ____ Facebook
    ____ Myspace
    ____ Linked In
    ____ _____(other, please fill in)

4) Approximately how many "friends" do you have within each of the applications you use?
    _____

5) Approximately how many hours per day do you use a social media applications?
    _____

6) If you had to pick a one social media application as the one you use the most which application would it be? _____

7) Approximately how much money do you spend eating out in a given week:
    $_____

8) Approximately how much money do you spend on entertainment in a given week:
    $_____

    • What types of entertainment do you spend money on?_____
      _____

9) How much money do you spend on hobbies a month? $_____

    • Please describe your hobbies: _____

10) Approximately how much money do you spend on clothing a month?
   $_____

   • Please describe your typical purchases:_____

11) How much money do you spend on your cell phone per month? $_____

12) Do you buy products online? ___Yes / No_____

13) Have you ever clicked on an ad within a social media application (e.g. Facebook)?
   ____Yes / No____

   • If you have, what was the ad for? _____

14) Have you ever purchased a product because of an advertisement within a social media
   application?
   _____Yes / No_____

   • If "yes", what was the product? _____

15) Have you ever purchased a product based on a recommendation from a friend in a social
   media application?   If you have what types of products were
   they?_____

   • Were any of the products purchased
     online?_____

APPENDIX 2. QUESTIONS FOR 2nd EXPLORATORY SURVEY

Some modifications were made to the survey formatting to make it possible to display the online survey questions within this document.

Please rate how important a particular brand is to you when considering purchasing the products listed below.

	Extremely Important	Very Important	Somewhat Important	Neither Important nor Unimportant	Somewhat Unimportant	Very Unimportant	Not at all Important
Laundry Detergent	❍	❍	❍	❍	❍	❍	❍
Cell Phone	❍	❍	❍	❍	❍	❍	❍
Laptop	❍	❍	❍	❍	❍	❍	❍
Vacation	❍	❍	❍	❍	❍	❍	❍
Haircut	❍	❍	❍	❍	❍	❍	❍
Movie Theater	❍	❍	❍	❍	❍	❍	❍
Breakfast cereal	❍	❍	❍	❍	❍	❍	❍
Shoes	❍	❍	❍	❍	❍	❍	❍
Jeans	❍	❍	❍	❍	❍	❍	❍
Pizza	❍	❍	❍	❍	❍	❍	❍
Car / Truck	❍	❍	❍	❍	❍	❍	❍
Picture Frame	❍	❍	❍	❍	❍	❍	❍
Soda / Pop	❍	❍	❍	❍	❍	❍	❍
Oil Change	❍	❍	❍	❍	❍	❍	❍
Toilet Paper	❍	❍	❍	❍	❍	❍	❍

Please rank how important brand is to you when considering purchasing the products listed below. Please rank #1 as the product you believe brand is most important to and mark #15 for the product you feel brand is least important.

_____ Laundry Detergent
_____ Cell Phone
_____ Laptop
_____ Vacation
_____ Haircut
_____ Movie Theater
_____ Breakfast cereal
_____ Shoes
_____ Jeans
_____ Pizza
_____ Car / Truck
_____ Picture Frame
_____ Soda / Pop
_____ Oil Change
_____ Toilet Paper

In your opinion, how many people have to "Like" a posting on Facebook for it to be popular?
_____ Slide the bar using your mouse to make your selection

If you see a posting on Facebook promoting a product, how many people need to comment to make it credible?
_____ Slide the bar using your mouse to make your selection

APPENDIX 3. Survey questions for Study 2 (Forced *Like*) and Study 3 experimental conditions

Some modifications were made to the survey formatting to make it possible to display the online survey questions within this document.

I have read and understood the above consent form and desire of my own free will to participate in this study
○ Yes
○ No

I am 18 years old or older.
○ Yes
○ No

Please check the circle that best describes you.
○ Male
○ Female

Please slide the bar to your age.
_____ Slide the bar using your mouse to make your selection

Are you married?
○ Yes
○ No

Would you describe yourself as:
○ American Indian/Native American
○ Asian
○ Black/African American
○ Hispanic/Latino
○ White/Caucasian
○ Pacific Islander
○ Other

I rarely purchase the latest fashion styles until I am sure my friends approve of them.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

It is important that others like the products and brands I buy.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

When buying products, I generally purchase those brands that I think others will approve of.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

If other people can see me using a product, I often purchase the brand they expect me to buy.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

I like to know what brands and products make good impressions on others.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

I achieve a sense of belonging by purchasing the same products and brands that others purchase.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

If I want to be like someone, I often try to buy the same brands that they buy.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

I often identify with other people by purchasing the same products and brands they purchase.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

To make sure I buy the right product or brand, I often observe what others are buying and using.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

If I have little experience with a product, I often ask my friends about the product.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

I often consult other people to help choose the best alternative available from a product class.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

I frequently gather information from friends or family about a product before I buy.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

How often do you feel that you lack companionship?
- ○ Hardly ever
- ○ Some of the time
- ○ Often

How often do you feel left out?
- ○ Hardly ever
- ○ Some of the time
- ○ Often

How often do you feel isolated from others?
- ○ Hardly ever
- ○ Some of the time
- ○ Often

When I am uncertain how to act in a social situation, I look to the behavior of others for cues.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

Burton is a company that manufactures and sells outdoor equipment and clothing.
Refer to the image below from Burton's Facebook page and then answer the questions below the image.

Mens Hoodies & Sweatshirts - Clothing - Burton
bit.ly

Take a look at this season's hoodies and zips from Burton. With a wide range of designs, styles and colours you can update your Spring/Summer style with ease.

Like · Comment · Share

👍 24 people like this.

Joe Harvie Did I tell you I got a fine wool suit on a trip to Scotland in 1977 at Burton's and another in 1985 for my wedding in Canada!
Thursday at 4:21am via mobile · Like

Paul Jones no one cares joe
Thursday at 7:00am · Like

Burton We do Joe! Love the old Burton stories - we think many a man has been married in a Burton suit - and we think it's good luck!
Yesterday at 9:56am · Like

The comment by Burton is

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Supportive of Joe	○	○	○	○	○	○	○
Personable	○	○	○	○	○	○	○
Social	○	○	○	○	○	○	○
Friendly	○	○	○	○	○	○	○
Likable	○	○	○	○	○	○	○
Human-like	○	○	○	○	○	○	○
Makes the ad easier to understand	○	○	○	○	○	○	○
Interactive	○	○	○	○	○	○	○

Do you use Facebook?
○ Yes
○ No

Approximately, how many friends do you have on Facebook?
_____ Slide the bar using your mouse to make your selection

I trust the people I have "Friended" in Facebook.
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

Have you "Liked" any companies on Facebook?
○ Yes
○ No

Approximately, how many companies have you "Liked" on Facebook
_____ Slide the bar using your mouse to make your selection

If you have "Liked" the Facebook page of some companies please list the names of the companies.
    Company 1
    Company 2
    Company 3
    Company 4
    Company 5

I trust the companies I have "Liked" in Facebook.
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

Do you read postings on company Facebook pages that you have liked?
❍ Yes
❍ No

Do you ever click on the "Like" button for comments you read on the Facebook pages of companies?
❍ Yes
❍ No

Have you ever posted comments on the Facebook page of a company?
❍ Yes
❍ No

If you have posted a comment on a company Facebook page do you remember the name of the company?
    Company 1
    Company 2
    Company 3
    Company 4

Please answer each question below:

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely is that you would "Unfriend" a person on Facebook if a comment was posted that you didn't agree with?	❍	❍	❍	❍	❍	❍	❍
How likely is it that you would "Unlike" a company on Facebook if a comment was posted that you didn't agree with?	❍	❍	❍	❍	❍	❍	❍

If a Friend on Facebook asked you to participate in a contest, what is the likelihood you would participate?	○	○	○	○	○	○	○
If a company you had "Liked" on Facebook asked you to participate in a contest, what is the likelihood you would participate?	○	○	○	○	○	○	○
If a Friend shares a comment that a product was just purchased how interested are you in the posting?	○	○	○	○	○	○	○

Imagine you were interested in buying a new pair of running shoes and that you had a Facebook friend who was on a college track team. How important would the friend's advice be concerning your decision-making about shoes?
- ○ Not at all Important
- ○ Very Unimportant
- ○ Somewhat Unimportant
- ○ Neither Important nor Unimportant
- ○ Somewhat Important
- ○ Very Important
- ○ Extremely Important

Imagine you were interested in buying a new pair of running shoes and that you had a "Liked" a shoe company on Facebook. How important would the company's advice be concerning your decision-making about shoes?

❍ Not at all Important
❍ Very Unimportant
❍ Somewhat Unimportant
❍ Neither Important nor Unimportant
❍ Somewhat Important
❍ Very Important
❍ Extremely Important

Using the scale below, how emotionally close do you feel to your 50 closest Friends on Facebook?
_____ Slide the bar using your mouse to make your selection

How emotionally close do you feel to your overall group of Friends on Facebook?
_____ Slide the bar using your mouse to make your selection

How emotionally close do you feel to companies you have "Liked" on Facebook?
_____ Slide the bar using your mouse to make your selection

Using the scale below, how emotionally close do you feel to companies you have "Liked" on Facebook?
_____ Slide the bar using your mouse to make your selection

How likely would you be to trust information from each of the following sources.

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Recommendations for a product from a person you know	❍	❍	❍	❍	❍	❍	❍
Recommendations for a product from a billboard	❍	❍	❍	❍	❍	❍	❍
Recommendations for a product from a TV commercial	❍	❍	❍	❍	❍	❍	❍
Recommendations for a product from a friend within Facebook	❍	❍	❍	❍	❍	❍	❍
Recommendations for a product from a company you have "liked" within Facebook	❍	❍	❍	❍	❍	❍	❍
Recommendations for a product from a magazine advertisement	❍	❍	❍	❍	❍	❍	❍
Recommendations for a product shown in a movie	❍	❍	❍	❍	❍	❍	❍

If Cindy was a Friend of yours on Facebook...

Cindy
August 13

Ok, I'm not one to post stupid crap that no one cares about, but this has changed my life! I just got a "Furminator" for my cat! OMG! If you own a furry beast like I do, you won't believe the difference it makes! It has eliminated 80-90% of shedding! I'm so happy I could cry! It was the best $35 I ever spent!

Like · Comment

Christina , April and 9 others like this.

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely would it be that you would trust this posting?	○	○	○	○	○	○	○
What is the chance that you would "Like" the comment?	○	○	○	○	○	○	○
What is the chance you would comment on the posting?	○	○	○	○	○	○	○
Would you consider the message personal?	○	○	○	○	○	○	○
How likely would it be that you would pass this posting on to a friend?	○	○	○	○	○	○	○

If you saw the following comment posted by a friend on Facebook...

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely would it be that you would trust this posting?	○	○	○	○	○	○	○
What is the chance that you would "Like" the comment?	○	○	○	○	○	○	○
What is the chance you would comment on the posting?	○	○	○	○	○	○	○
Would you consider the message personal?	○	○	○	○	○	○	○
How likely would it be that you would pass this posting on to a friend?	○	○	○	○	○	○	○

If you saw the following comment posted by a company on Facebook...

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely would it be that you would trust this posting?	❍	❍	❍	❍	❍	❍	❍
What is the chance that you would "Like" the comment?	❍	❍	❍	❍	❍	❍	❍
What is the chance you would comment on the posting?	❍	❍	❍	❍	❍	❍	❍
Would you consider the message personal?	❍	❍	❍	❍	❍	❍	❍
How likely would it be that you would pass this posting on to a friend?	❍	❍	❍	❍	❍	❍	❍

If you saw the following comment posted by a company on Facebook...

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely would it be that you would trust this posting?	○	○	○	○	○	○	○
What is the chance that you would "Like" the comment?	○	○	○	○	○	○	○
What is the chance you would comment on the posting?	○	○	○	○	○	○	○
Would you consider the message personal?	○	○	○	○	○	○	○
How likely would it be that you would pass this posting on to a friend?	○	○	○	○	○	○	○

If you received a recommendation about a product please rate the likelihood that you would pass the information on to a friend if the information came from each of the sources below:

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Recommendations for a product from a person you know	○	○	○	○	○	○	○
Recommendations for a product from a billboard	○	○	○	○	○	○	○
Recommendations for a product from a TV commercial	○	○	○	○	○	○	○
Recommendations for a product from a friend within Facebook	○	○	○	○	○	○	○
Recommendations for a product from a company you have "liked" within Facebook	○	○	○	○	○	○	○
Recommendations for a product from a magazine advertisement	○	○	○	○	○	○	○
Recommendations for a product shown in a movie	○	○	○	○	○	○	○

When you read postings on the Facebook page for a company you have "Liked" on Facebook how human-like do the postings seem?
_____ Slide the bar using your mouse to make your selection

Please open up the Facebook page listed below.:
https://www.facebook.com/pages/Destination_Fun_Travel/415401518521589 You may need to log into Facebook to be able to view the page. Next, imagine that you had "Liked" the page. You don't need to actually "Like" the page...just imagine that you   had. Then, spend one minute reading through some of the postings on the   page. Next, return to the online survey but leave the Facebook open so you can refer   to it during the survey.

Review the comments by Destination Fun Travel on the Facebook page and answer the questions below. The postings by Destination Fun Travel seem:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Personal	○	○	○	○	○	○	○
Trustworthy	○	○	○	○	○	○	○
Social	○	○	○	○	○	○	○
Interactive	○	○	○	○	○	○	○
Human-like	○	○	○	○	○	○	○
Friendly	○	○	○	○	○	○	○
Likable	○	○	○	○	○	○	○
Make the page seem easier to understand.	○	○	○	○	○	○	○

How likely would you be to:

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Share the information from the Destination Fun Facebook page with a friend?	❍	❍	❍	❍	❍	❍	❍
Post a reply to a person on the Destination Fun Travel Facebook page?	❍	❍	❍	❍	❍	❍	❍
Post a reply to Destination Fun Travel on the Facebook page?	❍	❍	❍	❍	❍	❍	❍

Imagine you wanted to ask a question about a spring break vacation of one of the people who posted a comment on the Facebook page. What would you write?

Imagine you wanted to ask a question about a spring break vacation of the company on its Facebook page. What would you write?

How strong of a connection do you feel to the people who have posted comments?
- ❍ Much Weaker
- ❍ Weaker
- ❍ Weak
- ❍ Undecided
- ❍ Strong
- ❍ Stronger
- ❍ Much Stronger

How strong of a connection do you feel to Destination Fun Travel?
- ○ Much Weaker
- ○ Weaker
- ○ Weak
- ○ Undecided
- ○ Strong
- ○ Stronger
- ○ Much Stronger

The postings by Destination Fun Travel seem personal.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

Review the postings by Destination Fun Travel. How human-like would you rate the postings?
_____ Slide the bar using your mouse to make your selection

Please open up the Facebook page listed below.:
https://www.facebook.com/pages/Destination_Fun-Travel/444615555590437   You may need to log into Facebook to be able to view the page. Next, imagine that you had "Liked" the page. You don't need to actually "Like" the page...just imagine that you   had. Then, spend one minute reading through some of the postings on the   page.   Next, return to the online survey but leave the Facebook open so you can refer   to it during the survey.

Review the comments by Destination Fun Travel on the Facebook page and answer the questions below. The postings by Destination Fun Travel seem:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Personal	❍	❍	❍	❍	❍	❍	❍
Trustworthy	❍	❍	❍	❍	❍	❍	❍
Social	❍	❍	❍	❍	❍	❍	❍
Interactive	❍	❍	❍	❍	❍	❍	❍
Human-like	❍	❍	❍	❍	❍	❍	❍
Friendly	❍	❍	❍	❍	❍	❍	❍
Likable	❍	❍	❍	❍	❍	❍	❍
Make the page seem easier to understand.	❍	❍	❍	❍	❍	❍	❍

How likely would you be to:

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Share the information from the Destination Fun Facebook page with a friend?	○	○	○	○	○	○	○
Post a reply to a person on the Destination Fun Travel Facebook page?	○	○	○	○	○	○	○
Post a reply to Destination Fun Travel on the Facebook page?	○	○	○	○	○	○	○

Imagine you wanted to ask a question about a spring break vacation of one of the people who posted a comment on the Facebook page. What would you write?

Imagine you wanted to ask a question about a spring break vacation of the company on its Facebook page. What would you write?

How strong of a connection do you feel to the people who have posted comments?
○ Much Weaker
○ Weaker
○ Weak
○ Undecided
○ Strong
○ Stronger
○ Much Stronger

How strong of a connection do you feel to Destination Fun Travel?
- ⭘ Much Weaker
- ⭘ Weaker
- ⭘ Weak
- ⭘ Undecided
- ⭘ Strong
- ⭘ Stronger
- ⭘ Much Stronger

The postings by Destination Fun Travel seem personal.
- ⭘ Strongly Disagree
- ⭘ Disagree
- ⭘ Somewhat Disagree
- ⭘ Neither Agree nor Disagree
- ⭘ Somewhat Agree
- ⭘ Agree
- ⭘ Strongly Agree

Review the postings by Destination Fun Travel. How human-like would you rate the postings?
_____ Slide the bar using your mouse to make your selection

Please open up the Facebook page listed below.:
https://www.facebook.com/pages/Destination_Fun_Travel/415401518521589   You may need to log into Facebook to be able to view the page. Then, spend one minute reading through some of the postings on the   page. Next, return to the online survey but leave the Facebook open so you can refer   to it during the survey.

Review the comments by Destination Fun Travel on the Facebook page and answer the questions below. The postings by Destination Fun Travel seem:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Personal	❍	❍	❍	❍	❍	❍	❍
Trustworthy	❍	❍	❍	❍	❍	❍	❍
Social	❍	❍	❍	❍	❍	❍	❍
Interactive	❍	❍	❍	❍	❍	❍	❍
Human-like	❍	❍	❍	❍	❍	❍	❍
Friendly	❍	❍	❍	❍	❍	❍	❍
Likable	❍	❍	❍	❍	❍	❍	❍
Make the page seem easier to understand.	❍	❍	❍	❍	❍	❍	❍

How likely would you be to:

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Share the information from the Destination Fun Facebook page with a friend?	○	○	○	○	○	○	○
Post a reply to a person on the Destination Fun Travel Facebook page?	○	○	○	○	○	○	○
Post a reply to Destination Fun Travel on the Facebook page?	○	○	○	○	○	○	○

Imagine you wanted to ask a question about a spring break vacation of one of the people who posted a comment on the Facebook page. What would you write?

Imagine you wanted to ask a question about a spring break vacation of the company on its Facebook page. What would you write?

How strong of a connection do you feel to the people who have posted comments?
○ Much Weaker
○ Weaker
○ Weak
○ Undecided
○ Strong
○ Stronger
○ Much Stronger

How strong of a connection do you feel to Destination Fun Travel?
- ○ Much Weaker
- ○ Weaker
- ○ Weak
- ○ Undecided
- ○ Strong
- ○ Stronger
- ○ Much Stronger

The postings by Destination Fun Travel seem personal.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

Review the postings by Destination Fun Travel. How human-like would you rate the postings?
_____ Slide the bar using your mouse to make your selection

Please open up the Facebook page listed below.:
https://www.facebook.com/pages/Destination_Fun-Travel/444615555590437   You may need to log into Facebook to be able to view the page. Then, spend one minute reading through some of the postings on the   page.   Next, return to the online survey but leave the Facebook open so you can refer   to it during the survey.

Review the comments by Destination Fun Travel on the Facebook page and answer the questions below. The postings by Destination Fun Travel seem:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Personal	❍	❍	❍	❍	❍	❍	❍
Trustworthy	❍	❍	❍	❍	❍	❍	❍
Social	❍	❍	❍	❍	❍	❍	❍
Interactive	❍	❍	❍	❍	❍	❍	❍
Human-like	❍	❍	❍	❍	❍	❍	❍
Friendly	❍	❍	❍	❍	❍	❍	❍
Likable	❍	❍	❍	❍	❍	❍	❍
Make the page seem easier to understand.	❍	❍	❍	❍	❍	❍	❍

How likely would you be to:

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Share the information from the Destination Fun Facebook page with a friend?	○	○	○	○	○	○	○
Post a reply to a person on the Destination Fun Travel Facebook page?	○	○	○	○	○	○	○
Post a reply to Destination Fun Travel on the Facebook page?	○	○	○	○	○	○	○

Imagine you wanted to ask a question about a spring break vacation of one of the people who posted a comment on the Facebook page. What would you write?

Imagine you wanted to ask a question about a spring break vacation of the company on its Facebook page. What would you write?

How strong of a connection do you feel to the people who have posted comments?
○ Much Weaker
○ Weaker
○ Weak
○ Undecided
○ Strong
○ Stronger
○ Much Stronger

How strong of a connection do you feel to Destination Fun Travel?
- ○ Much Weaker
- ○ Weaker
- ○ Weak
- ○ Undecided
- ○ Strong
- ○ Stronger
- ○ Much Stronger

The postings by Destination Fun Travel seem personal.
- ○ Strongly Disagree
- ○ Disagree
- ○ Somewhat Disagree
- ○ Neither Agree nor Disagree
- ○ Somewhat Agree
- ○ Agree
- ○ Strongly Agree

Review the postings by Destination Fun Travel. How human-like would you rate the postings?
_____ Slide the bar using your mouse to make your selection

Thank you for your participation.

APPENDIX 4. IRB APROVALS

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 3/2/2012

To: Shayne Narjee
38518-436th Street
St. Peter, MN 56082

CC: Dr. Anthony Townsend
3222 Gerdin

From: Office for Responsible Research

Title: Applying Social Response Theory to Word-of-Mouth Communication in Online Social Networks

IRB ID: 12-098

Study Review Date: 3/2/2012

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
  - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
  - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

- (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified directly or through identifiers linked to the subjects.

The determination of exemption means that:
- You do not need to submit an application for annual continuing review.

- You must carry out the research as described in the IRB application. Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. Only the IRB or designees may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.

South Central College

A MINNESOTA COMMUNITY AND TECHNICAL COLLEGE

MEMO

DATE: September 10, 2012
TO: Shayne Narjes
FROM: Research & Planning (Institutional Review Board)
RE: Research Proposal for Exempt Status

This memo is to confirm that the following Applications of Research for Review submitted to the Institutiona. Review Board have been reviewed and meet the criteria for exempt status: Category 4

Applying Social Response Theory to Word-of-Mouth Communication in Online Social Networks

You may begin to conduct your research as outl ned in your research applications. Please note that any deviation from the process as outlined in your applications must be resubmitted to the Institutional Review Board prior to beginning to your research.

Date the completed application was submitted to IRB: September 9, 2012
Date complete application was reviewed and approved: September 10, 2012

Note: IRB approval was not required at Minnesota State University, Mankato since the principle investigator conducting this research was not doing so as a student or faculty member of the university.

APPENDIX 5. DESTINATION FUN TRAVEL SITE EXAMPLE: LOW SOCIAL

COMMUNICATION EXAMPLE

APPENDIX 6. DESTINATION FUN TRAVEL SITE EXAMPLE: HIGH SOCIAL

COMMUNICATION EXAMPLE

Destination_Fun_Travel
September 23

A weekend get-a-way is easy to plan with Destination Fun Travel. Provide details on what you want and your price range and you'll be on vacation soon.

Like · Comment · Share   👍 1 💬 4

👍 Jeff Scholl likes this.

Kenneth Steinke Is there a way to get concert tickets included in our overall vacation package costs?
September 23 at 1:55pm · Like

Destination_Fun_Travel With a lot of concerts we can help you bundle the costs by helping arrange for a stay at the hotel connected to concert venue.
September 23 at 1:57pm · Like · 👍 1

Kenneth Steinke Great...thanks
September 23 at 1:58pm · Like

Destination_Fun_Travel Sure, just check in when you are ready to book the trip.
September 23 at 1:58pm · Like

Destination_Fun_Travel
September 23

No need to wait until spring break to take a vacation. Ticket sales for our skiing trip will start soon.

Like · Comment · Share   👍 2 💬 4

👍 Joseph Rodriquez and Kenneth Steinke like this.

Nicole Obryant We took a winter trip through a different company last year and the flight was messed up. Does that happen on your trips?
September 23 at 1:45pm · Like

Destination_Fun_Travel Nicole, no flight delays or any problems. When are hoping to travel?
September 23 at 1:47pm · Like

Nicole Obryant Probably the last week of November. Could you get us cheap air fair but a nice hotel in Breckenridge?
September 23 at 1:49pm · Like

Destination_Fun_Travel Yes, reasonable flight price and as low as $99 a night for hotel if you book early.
September 23 at 1:52pm · Like · 👍 1

Offering another fantastic spring break vacation this year and hoping all friends can make it.

Like · Comment · Share   👍 10 💬 3

👍 Nicole Obryant, Leandro Hallowich and 7 others like this.

Brian Reel I cannot wait to take another trip with you.
September 20 at 9:55am · Like · 👍 2
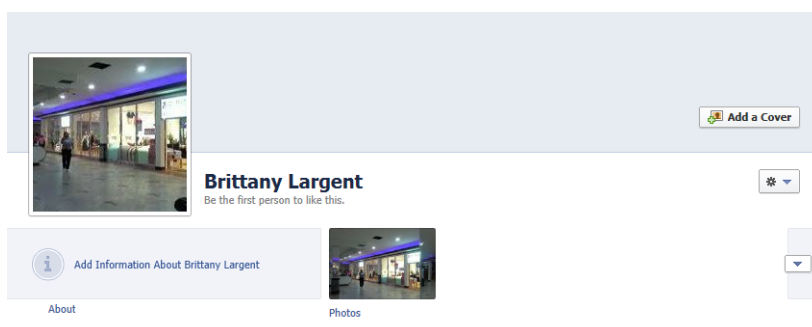
Cathy Waterman Me too...that was great last time.
September 20 at 9:56am · Like · 👍 1

Destination_Fun_Travel Brian and Cathy, great to hear from you. It should be a fun spring break again this year!
September 20 at 9:58am · Like

APPENDIX 7. ALIAS ACCOUNT EXAMPLES
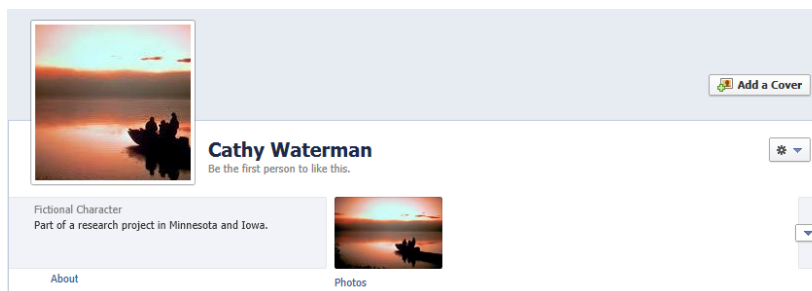
Brian Reel
Be the first person to like this.

Add Information About Brian Reel
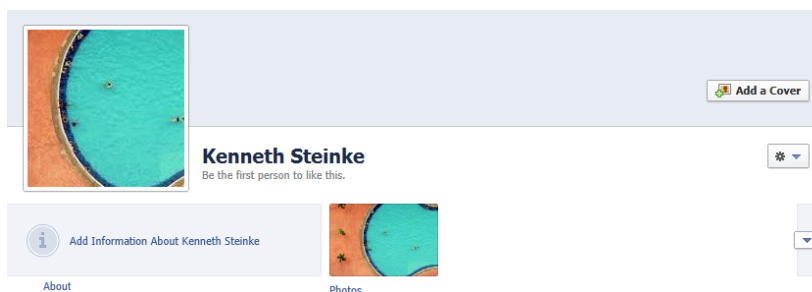
About

Photos

Brittany Largent
Be the first person to like this.

Add Information About Brittany Largent

About

Photos

Jeff Scholl
Be the first person to like this.

Add Information About Jeff Scholl

About

Photos

Cathy Waterman
Be the first person to like this.

Fictional Character
Part of a research project in Minnesota and Iowa.

About

Photos

Kenneth Steinke
Be the first person to like this.

Add Information About Kenneth Steinke

About

Photos

APPENDIX 8. EXAMPLES FROM CONTENT ANALYSIS

APPENDIX 9. HUMAN-LIKE RESPONSE EXAMPLE FROM OXO CONTENT

ANALYSIS

Victoria Fabrizio Trinanes Does it fold and put away?
Friday at 7:35am via mobile · Like · 👍 4

OXO Hi Victoria, the Hamper is indeed collapsible! For more info, please visit: http://bit.ly/XYtRp9

Flip-In Hamper
www.oxo.com

Try OXO's Flip-In Hamper for convenient and discrete laundry storage! Its unique...See More

Friday at 9:06am · Like · 👍 4

Jennifer Lynn What about when my cats jump into it? O_o
Friday at 11:43am via mobile · Like · 👍 11

Caryn McDaniel Broomby I think Victoria was asking if it folds the laundry, oxo!!
Friday at 12:20pm via mobile · Like · 👍 11

APPENDIX 10. ANTHROPOMORPHIC EFFECTANCE MOTIVATION EXAMPLE

FROM OXO CONTENT ANALYSIS

Kathleen Nelson Does the red part come off for washing? Is the red part replaceable?
March 6 at 6:15am via mobile · Like

OXO Hi Kathleen, yes, the microfiber unsnaps and is machine washable. We also sell replacement Duster heads. 🙂
March 6 at 8:42am · Like

Candy Semenuk where can i buy it? I clean houses for a living & always have to throw them out for getting dirty.
11 hours ago · Like