

EFFECTS OF ORGANIZATION SUSTAINABILITY COMMUNICATION:
THE INFLUENCE OF INTERACTIVITY, MESSAGE APPEAL,
AND TYPE OF MEDIUM

by

JEYOUNG OH

EYUN-JUNG KI, COMMITTEE CHAIR
KARLA K. GOWER
LU TANG

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ABSTRACT

To understand how interactivity, message appeal, and type of medium affect public perceptions and reactions to an organization in organization sustainability communication, this study conducted a 2 (interactivity: high vs. low) x 2 (message appeal: gain-focused vs. loss-focused) x 2 (medium type: Facebook vs. organizational blog) experimental survey ($N = 394$). Results show that the level of interactivity and type of message appeal appear to significantly influence the social presence of the message and the public's positive word-of-mouth intention. The public's intention to generate positive word-of-mouth was highest when the communication had high interactivity with a gain-focused message conveyed on the organization's Facebook page.

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CHAPTER 1

INTRODUCTION

As the concern about limited natural resources mounts, sustainability has become an important issue to stakeholders striving to become more responsible citizens. To satisfy stakeholders' needs and governmental regulations, organizations are putting effort into becoming more sustainable (Stead & Stead, 2015). In a survey of 1,000 chief executive officers (CEOs) by the United Nations (UN) Global Compact and Accenture, 93% of the respondents stated that sustainability would have numerous effects on the future of their companies (Hayward et al., 2013). In addition to the business sector, the nonprofit sector is also becoming more sustainable in management and operations (Bell, Masaoka, & Zimmerman, 2010; Weerawardena, McDonald, & Mort, 2010).

To promote their sustainability efforts, organizations communicate their sustainability activities. Traditionally, these sustainability initiatives have been promoted through newspaper or television news programs. However, with the spread of computer-mediated communication such as social networking sites (SNS), organizations now also use Internet-based communication technologies to communicate with their stakeholders. For example, Wal-Mart created a website dedicated to its sustainable efforts, and General Electric has a blog and newsfeeds to share its stories about sustainability (Fairridge Group, 2009).

Sustainability is a concept with a variety of definitions, but most scholars agree that it is a way to fulfill the needs of the current generation without harming future generations' economic, societal, and environmental prospects (Giddings, Hopwood, & O'Brien, 2002; World

Commission on Environment and Development [WCED], 1987). For the benefit and satisfaction of their publics, more organizations are adopting sustainable operations systems. Along with these changes, scholars have started to look into the benefits of communicating organizational sustainability activities with stakeholders. Some studies have documented that sustainability communication has positive effects on an organization, such as enhanced reputation (Elkington, 1994), greater stakeholder trust (Dean, 2003), and increased environmental legitimacy and admiration for the organization (Bortree, 2009). Despite these benefits, studies on effective ways to create organizational sustainability communication messages are still in the inception stage. To generate more effective messages with greater impact on stakeholders, understanding what strategies result in the most efficient sustainability messages for organizations is an important issue. In particular, communication scholars have started to explore how organizations use media technology to promote their sustainability initiatives. A few have examined how organizations use their websites to communicate sustainability performance (Ki & Shin, 2015). Others have observed effective responses to environmental crises (Fink, 1986; Shrivastava & Siomkos, 1989) as well as relationships between the perceived importance of sustainability among stakeholders and the environmental obligation of organizations (Henriques & Sadorsky, 1999).

As technology allows organizations to participate in two-way communications with their publics, scholars have tested how messages with different communication strategies affect the public's reactions. One important factor in effective online communication is interactivity. The level of organizational interactivity with web technology leads to relationship building with the public (Saffer, Sommerfeldt, & Taylor, 2013). Another factor to be considered in sustainability communication is the kind of message appeals environmental messages use. The concept of message appeal consists of gain- or loss-framed appeals (Rothman & Salovey, 1997). Gain-

framed appeals emphasize the potential benefits of positive actions, whereas loss-framed appeals focus on potential loss by not engaging in those activities. Finally, the type of medium affects online message reactions in various communication fields (e.g., Men, 2015; Schultz, Utz, & Göritz, 2011; Utz, Schultz, & Glocka, 2013).

This study investigates the influence of interactivity, message appeal, and type of medium on social presence and positive word-of-mouth intention in the context of organizational sustainability communications. By demonstrating whether the three factors influence the social presence of messages and WOM intention, this study will contribute to the emergent area of organizations' sustainability communication by providing advice on how to create more effective messages. This study will show whether factors such as interactivity, message appeal, and type of medium will help organizations create more appealing messages for their publics. In addition, by looking at the potential interactions among the factors, this study will provide future direction for organizations in terms of creating effective messages about sustainability.

CHAPTER 2

LITERATURE REVIEW

Organization Sustainability Communications

As stakeholders' interest in a sustainable environment has increased, organizations have put more effort into their sustainable operation systems. To respond to public concerns about sustainability and to invest in future values that organizations can achieve, organizations adopt sustainability initiatives (Robertson, 2014). They also engage in sustainability communication for various reasons and motivations (Kolk, 2003). Table 1 shows common organizational motivations for engaging in sustainability communication.

Table 1. Organizations' Motivations for Sustainability Communication

Reasons for reporting

- Enhanced ability to track progress against specific targets
- Facilitating the implementation of the environmental strategy
- Greater awareness of broad environmental issues throughout the organization
- Ability to clearly convey the corporate message internally and externally
- Improved all-round credibility from greater transparency
- Ability to communication efforts and standards
- License to operate and campaign
- Reputational benefits, cost savings identification, increased efficiency, enhanced business development opportunities and enhanced staff morale

Adopted from "A decade of sustainability reporting: developments and significance," by Kolk, A. (2004). *International Journal of Environment and Sustainable Development*, 3(1), 51-64.

In 1992, the United Nations Conference on Environment popularized the term *sustainable development*, which refers to sustainable social, economic, and environmental development (Becker, Jahn, & Stiess, 1999; WCED, 1987). Sustainability strives to fulfill the

principles of environmental integrity, social equity, and economic prosperity (Bansal, 2005). Although organizations have started to engage in green initiatives, many have not considered how to sustain their plans for the long term (Sheth, Sethia, & Srinivas, 2011). As a way of generating more maintainable strategies, effectively communicating the sustainability efforts of organizations has thus become an important area of study for scholars in the communication field.

Several terms have been used to describe the sustainability communications that organizations put out (e.g., *sustainable communication*, *corporate social responsibility communication*, *environmental communication*, *green communication*). However, this study adopts Ki and Shin's (2015) definition of organization sustainability communication: "an organization's voluntary, planned, and strategic communication efforts for working towards a balance of economic, social and environment values in order to achieve the long-term goals of an organization and its stakeholders" (p. 37). The definition aligns with the meaning proposed by the United Nations Conference on Environment (WCED, 1987).

Because most of the studies on sustainability are about the environment (Ki, Shin, & Oh, 2015), this study focuses on the environmental side of sustainability communication. A handful of studies have looked at the consequences of environmental communications, but studies on the factors that influence the effects of sustainability communication remain limited. For example, Gilley, Worrell, and El-Jelly (2000) examined the consequences of firms' environmental initiatives on their financial performance. As there is a gap in the literature on the factors affecting sustainability communication, especially from organizations, Gilley et al. (2000) suggested that scholars should investigate the effectiveness of environmental initiatives and their messages. To fill this gap, this study will look at variables that have been demonstrated to

influence public perceptions and intentions toward messages in other communication fields (e.g., crisis communication) and apply them to see whether they will generate similar or different results in terms of organizations' sustainability communication focusing on environmental issues.

Interactivity

Online technology has become an essential tool for organizational communication (Stuart & Jones, 2004; Sullivan, 1999). One of the distinctive characteristics of online communication is its interactivity. In public relations, interactivity has been a key concept in building relationships using mediated communication tools (Jo & Kim, 2003; Kelleher, 2009). However, the definition of interactivity varies depending on the study (e.g., Blattberg & Deighton, 1991; Kiousis, 2002). Wu (2005) defined it as the capability of generating or interacting with interactive messages (e.g., Hoffman & Novak, 1996; Rafaeli, 1988). Similarly, Kiousis (2002) defined it as "the degree to which a communication technology can create a mediated environment in which participants can communicate both synchronously and asynchronously and participate in reciprocal message exchanges" (p. 372). Some scholars have focused on both interpersonal and mechanical perspectives (e.g., Sundar, Kalynaraman and Brown, 2003). Sundar, Kalynaraman and Brown (2003) proposed two classifications of interactivity: functional vs. contingency. Functional interactivity allows users to interact with different features. Contingency interactivity is the extent of interchangeability between a message receiver and a message provider.

Functional view of interactivity. A functional view of interactivity is "basically an interface's capacity for conducting a dialogue or information exchange between users and the interface" (Sundar et al., 2003, p. 33). Different media have different capabilities of dialogue or information exchange between message receivers, and when those capabilities of interface are

increased, interactivity in the functional view is increased (Sundar et al., 2003). Heeter (1989) suggested that the technology aspect of a medium defines interactivity. In a similar vein, functional features such as email links, feedback forms, chat rooms, and hyperlinks increase functional interactivity (e.g., Ahern & Stromer-Galley, 2000; Lee & Shin, 2012; Thorson & Rodgers, 2006). More functional features equates to more interactivity. From this point of view, the mere presence of these features can be considered indicative of interactivity; the extent of users' actual engagement with the features does not influence the level of interactivity. For example, Sundar et al. (1998) conducted an experimental study with a political candidate and found that medium and high interactivity (offering a website with a link to more information about a political candidate) helped participants perceive the candidate as more caring and sensitive than low interactivity (offering a website with no hyperlink).

Contingency view of interactivity. According to Rafaeli (1988), interactivity is “an expression of the extent that in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmission” (p. 111). Rafaeli noted that three different levels exist in the contingency view of interactivity:

- not interactive: a message is not related to previous messages;
- reactive: a later message is related to a message immediately preceding it;
- interactive: a later message is related to a number of previous messages.

Based on this definition, Sundar et al. (2003) claimed that high interactivity means communicating with other messages. This developed into the concept of contingency, which is that later messages should be contingent on previous messages.

Three categories of interactivity. In addition to functional and contingency perspectives, interactivity can also be divided into subgroups. In her review of twenty years of communication studies on interactivity, McMillan (2006) claimed that the concept can be divided into three categories:

- User-to-document: the choice to access a file or to choose which links to follow, which can offer each user a unique experience;
- User-to-system: users' ability to choose what to access and how to access it. For example, news is delivered to the desktop via RSS feeds, and users can take part in file sharing activities and have access to a wide variety of information and material; and
- User-to-user: engagement in online conversation or creation of online materials and other users' experiences.

McMillan suggested that researchers should locate their work within one or more of the categories. Interactivity in this study will be examined within the category of user-to-document. In this perspective, interactivity is conceptualized as how message receivers "interact with documents and the creators of those documents" (McMillan, 2006, p. 209). For this study, there are possibilities for users to interact with the blog or Facebook author by reading the message and other receivers who might read the posting.

Conversational human voice as a way to improve interactivity. To evaluate interactivity, some communication studies contain hyperlinks (Lee & Shin, 2012; Thorson & Rodgers, 2006) and provide messages in a conversational human voice, which is defined as "an engaging and natural style of organizational communication as perceived by an organization's publics based on interactions between individuals in the organization and individuals in publics" (Kelleher, 2009, p. 177). Online technologies allow organizations to initiate conversations with

the public. According to Dawson (2015), the tone of voice an organization uses in online media represents its identity. Searls and Weinberger (2000) claimed that traditional organizational messages treated the public as a targeted audience. However, the literature has suggested that organizations should engage in conversations with online publics rather than trying to target them (Searls & Weinberger, 2000; Solis & Breakenridge, 2009). A conversational human voice is an important characteristic of online communication that favors organizations (Searls & Weinberger, 2000).

Tone of voice can set an atmosphere for the message. The literature suggests that organizations use one of two types of message voice: corporate and conversational (e.g., Kelleher, 2009; Sweetser, 2010). Messages with a corporate tone of voice are written in the third person, whereas messages written in a conversational voice are first-person narratives (e.g., Park & Cameron, 2014). A conversational human voice is considered to be more sincere and transparent. As a result, it increases a message's perceived effectiveness (e.g., Kelleher, 2009; Kelleher & Miller, 2006; Sweetser & Metzgar, 2007), elicits positive responses (Kelleher, 2009), and improves relationships with the public (Kelleher, 2009; Kelleher & Miller, 2006; Sweetser, & Metzgar, 2007; Yang & Lim, 2009), especially in social media (Kerkhof, Beugels, Utz, & Beukeboom, 2011). Thorson and Rodgers (2006) manipulated interactivity by providing a political candidate's personal web posting written in first person with a feedback forum (high interactivity) and one written in third person with no feedback forum (low interactivity). The results of the study suggested that the use of human voice and the feedback mechanism increased perceived interactivity among message receivers and involvement with the candidate. With regard to the degree of interactivity of online media tools that organizations use to communicate

with the public, interactivity is operationalized in the current study as the presence of hyperlinks and the use of a conversational human voice.

Message Appeal

To form an effective message, organizations should focus on the needs and wants of the message receivers (Maibach, 1993). Message appeal is a strategy to manipulate a message recipient's perception of the outcomes of certain behaviors (Rothman & Salovey, 1997). Those appeals also make message recipients react differently to a message depending on how the message is framed (Levin & Gaeth, 1988; Maheswaren & Meyers-Levy, 1990; Pelletier & Sharp, 2008). Studies have shown that the way information is framed can affect the perceived importance of a program and the message recipient's behavior (e.g., Rothman, Bartels, Wlaschin, & Salovey, 2006). Different appeals in messages affect how individuals perceive and evaluate a problem (Tversky & Kahneman, 1981), thus message appeal has been used as a theoretical approach to develop effective messages (e.g., Rothman et al., 2006; Rothman & Salovey, 1997).

Two types of message appeals have been used widely: gain-framed appeals and loss-framed appeals (Rothman & Salovey, 1997). Gain-framed appeals stress the positive consequences of taking actions, while loss-framed appeals emphasize the losses resulting from failing to take actions (Rothman et al., 2006). For example, a gain-framed message focuses on benefits that individuals will have when they engage in environmentally friendly behavior, such as recycling, while a loss-framed message emphasizes the negative consequences for not participating in recycling (Davis, 1995). Davis also demonstrated that different message appeals related to an environmental issue could influence the message recipient's environmentally responsible behavior intention. Table 2 shows some examples of gain- and loss-framed messages.

Table 2. Examples of Gain- and Loss-Framed Messages

Gain	Loss
Desirable outcomes	Undesirable outcomes
“By using this brand of meat, you can cut down your dietary intake of cholesterol and fat; By choosing LeanBeef, you will discover a healthier meal option. And you’ll enjoy the healthy, protein-rich meal that the meat provides.”	“By not using this brand of meat, you can fail to cut down your dietary intake of cholesterol and fat. By not choosing LeanBeef, you will not discover a healthier meal option. And you’ll miss out on the healthy, protein-rich meal that the meat provides.”

Adopted from “Exploring message appeal outcomes when systematic, heuristic, or both types of processing occur,” by Meyers-Levy, J., & Maheswaran, D. (2004). *Journal of Consumer Psychology*, 14(1), 159-167.

With more people concerned about environmental issues, scholars have tried to find the most effective way to motivate individuals to actually engage in environmentally responsible behaviors (e.g., Gill, Crosby, & Taylor, 1986; Newman, Howlett, Burton, Kozup, & Heintz Tangari, 2012; Temminck, Mearns, & Fruhen, 2015). Because a single environmental issue can be interpreted from different perspectives and with potential solutions, engaging with environmental problems has been considered “hard” (Bardwell, 1991). To make it easier for message receivers to understand the whole situation related to an environmental issue, Bardwell presented how problem-framing can be used in the context of environmental issues. Framing in her study refers to defining the problem and providing interpretations of the problem. The current study extends the concept by striving to find the way organizations can encourage publics to engage with and support the environmental initiatives of organizations. Researchers have examined the role of message appeal within the context of environmental communication; however, the results of message appeal are unclear vary because it is often used with other message strategies. For example, Obermiller (1995) tested message appeal with salience of an environmental problem, and Davis (1995) studied message appeal with another message strategy called target framing.

Diamantopoulos, Schlegelmilch, Sinkovics, and Bohlen (2003) suggested that organizations should strive to explain not only the environmental problems that society faces, but also the potential outcomes regarding the issues in their environmental communication. By framing both environmental problems and potential outcomes differently using either gain- or loss-framed appeals, organizations can see the potential differences engendered in emphasizing either the environmental enhancement or the environmental destruction they will cause through not engaging in their environmentally sustainable initiatives.

Type of Medium

Since the first environment-focused reports were released in 1989, an increasing number of companies have started to share their sustainability efforts with the public (Kolk, 2004). With the advent of Internet technology, organizations have used social media to interact with the public (Kaplan & Haenlein, 2010). One of the reasons organizations use social media is to communicate their sustainability efforts. Although the number of public records and statements by organizations about their sustainability efforts has significantly increased (Helfgott & Ludke, 2015), scholars have mainly investigated activities on corporate websites (e.g., Jose & Lee, 2007). With more platforms available, it is necessary to test whether conveying the same sustainability message in a different medium can make a difference in the message's effectiveness. As McLuhan and Fiore (1967) describe, the type of medium influences message effectiveness more than the content does (e.g., Schultz et al., 2011). This concept becomes more obvious with Internet technologies. Traditional one-way mass media such as television, newspapers, and magazines have limited interactivity compared to online media. For example, an online newspaper can provide more interactions between organizations and publics than a

printed newspaper. Online interaction such as a hyperlink to a related news article, comment section or email address of a writer can increase the potential interaction with readers.

Mediated communication tools distribute countless messages to the public and create two-way communication (Wright, 2001). Several studies have demonstrated that communication messages with more interactive and dialogic features have a greater impact on building relationships with the public, and most of the time those features are part of new media technology (e.g. Kent, Taylor, & White, 2003; Schultz & Wehemier, 2010; White & Raman, 2000). As organizations consider social media to be effective in reaching out to stakeholders (e.g. Saxton & Waters, 2014; Waters, Burnett, Lamm, & Lucas, 2009), it is necessary to examine the effect of different online media.

In particular, social media is “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content” (Kaplan & Haenlein, 2010, p. 61). In terms of organizational sustainability communication, even though it is still underrepresented (Manetti & Bellucci, 2016), organizations have started to engage in sharing their green efforts on online media tools such as Facebook and blogs (e.g., FairRidge Group, 2009).

Facebook. Facebook, a micro-blogging social networking site initially established for Harvard University students, has become one of the most popular social media platforms in the world. Companies have been using Facebook as a marketing channel because of its potential as a business booster (Hansson, Wrangmo, & Solberg Søylen, 2013). More than 15 million brands have a Facebook page (GroSocial, n.d.; Koetsier, 2013). With its ability to generate interactivity, Facebook has been an effective tool for engaging in two-way communication with users (Hunt, Atkin, & Krishnan, 2012; Smith & Kidder, 2010). For example, Fortune 500 companies use

Facebook to spread word-of-mouth through “like” features to enhance their reputations (Svensson, 2011; Swani, Milne, & Brown, 2013).

Corporate blogs. An increasing number of organizations engage in communication with publics via blogs, which have become an additional communication platform for public relations (Scoble & Israel, 2006). An organization blog is “an online repository serving as a virtual storehouse of information, where organizations post content for consumer consumption” (Ahuja & Medury, 2010, p. 91). Blogs can provide both functional and contingency interactivity (Keheller, 2009). Because blogs are intended to be a place to communicate with readers, it is easy for organizations to use them to engage in two-way communication (Baker & Green, 2005). However, only few studies have investigated Facebook and blogs in the context of environmental communication. This study fills the gap in the literature by examining the effects of blogs and Facebook on a message’s social presence and intention to engage in word-of-mouth communication among recipients.

Social Presence Theory

As the network-based environment expands, more and more scholars are studying online presence and its effects on mediated two-way communication (e.g., Lombard & Ditton, 1997). Social presence, referring to a sense of being together, has been considered one of the most general terms to measure presence (e.g., Biocca, Harms, & Burgoon, 2003). The consequences of high social presence include trust toward an organization (e.g., Beldad, Jong, & Steehouder, 2010; Cyr, Hassanein, Head, & Ivanov, 2007), online purchase intention (Gefen & Straub, 2004), and satisfaction (Gunawardena & Zittle, 1997).

Studies have demonstrated that interactivity has a positive effect on the social presence of messages in the virtual environment (e.g., Fortin & Dholakia, 2005). Message audiences feel a

higher social presence when they think they are interacting with another intelligent being behind the message (Huang, 2002). Some positive impacts engendered by interactivity via conversational human voice in online communication are associated with social presence theory. Research on social presence has suggested that personalization of an online message causes an increase in perceived human contact, which increases social presence (Kiousis, 2002; Park & Cameron, 2014) and hence interaction between individuals in different places via messages (Tu & McIsaac, 2002). Online mediated communication does not feature face-to-face contact; however, by adding the feeling of a persona, such as a first-person narrative, the message audience may feel engaged in interpersonal communication (Thorson & Rodgers, 2006). Messages with higher social presence benefit organizations by encouraging the public to interact with them on a personal level. Because interactivity is considered an indicator of message effectiveness (Cho & Leckenby, 1999), measuring social presence, which positively correlates to interactivity, is a rational way to determine the effectiveness of an organization's sustainable communication.

How a message is framed engenders different reactions from message recipients, such as perceived message credibility (Lee & Koo, 2012), behavior intention (Block & Keller, 1995; Davis, 1997), and message persuasiveness (Homer & Yoon, 1992). Positively framed messages are considered to be more persuasive than negatively framed messages (Smith & Petty, 1996). When a message is persuasive, people tend to think the message sender is natural, warm, calm, and pleasant (Hall, 1980). Those factors can provide the feeling of a persona, which can increase perceived social presence in an online environment. Message appeal has been studied in various contexts (e.g., Smith & Petty, 1996); however, a gap still exists in the literature on the relationship between message appeal and social presence.

Short, Williams, and Christie (1976) has stated that each medium has a fixed social presence and considers social presence to be a measure of a medium's quality. The extent of a medium to carry information such as "facial expression, direction of gaze, posture, dress, and nonverbal cues" is an indication of having social presence (as cited in Gunawardena & Zittle, 1997). Some digital media emphasize the presence of other individuals by providing different features (Cheung, Chiu, & Lee, 2011). For example, Facebook has the presence of others in the News Feed, whereas a blog has a comment section where readers can engage in online conversations with the blogger and with each other. Facebook and blogs are both considered interactive media (Castronovo & Huang, 2012; Walther, Van Der Heide, Kim, Westerman, & Tong, 2008), but they each have a different level of interactivity (Yoo & Gil de Zuñiga, 2014), which suggests they may have different levels of perceived social presence.

Word-of-Mouth Intention

Word-of-mouth (WOM) is "informal communication directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers" (Westbrook, 1987, p. 261). WOM communication is an important factor in the public's attitudes and behaviors towards organizations (Day, 1971; Herr, Kardes, & Kim, 1991; Katz & Lazarsfeld, 1955; Murray, 1991). Engaging in positive WOM is a strong supportive behavior toward organizations (Godes & Mayzlin, 2004). Because organization sustainability communication strives to build positive relationships with the public, it is important to look at the WOM intentions of message receivers. If an individual shares or comments on an organization's sustainability message as a reaction, he or she is more likely to engage in supportive behavior toward the organization. As intention toward behavior can predict actual behavior (Fishbein & Ajzen, 1975; Sheppard, Hartwick, & Warshaw, 1988), attitude towards

environmental issues correlates with the environmental behavior of those who do not express their intentions (e.g., Hines, Hungerford, & Tomera, 1987). This implies that those who express their pro-environmental intention, which includes supporting environmentally responsible acts of an organization by engaging in positive WOM, are more likely to engage in environment-related activities, which may include supporting pro-environment organizations.

Previous studies have shown that interactivity engenders positive WOM intentions. For example, Park and Lee (2013) demonstrated that human presence on an organizations' digital media page generates positive WOM, and Park and Cameron (2014) showed that messages with a conversational human voice encourage the public's positive WOM behavior more than those with an organizational voice. In addition to interactivity, message appeal also influences message recipients' attitudes and behavioral intentions towards the messages. Davis (1997) framed an environmental problem using gain- and loss-framed appeals, and the results indicated that message recipients had a better attitude toward a particular message when that message used gain-framed appeals versus loss-framed appeals. He also looked at believability, personal relevance, and importance of the message, but none of the variables differed significantly depending on the message appeal. Previous literature indicated that individuals evaluate positive and negative experience differently (Bryant, 1989). Positive WOM can be related with gains individuals receive from an organization (Alexandrov, Lilly, & Babakus, 2013). However, there has been no study on how different message appeal affect individuals' WOM intention.

With the opportunities offered in new communication technologies, scholars have endeavored to better understand WOM in the online environment (Swani et al., 2013). The effect of WOM online is crucial for an organization's brand awareness, sales revenue, and return on investment (Godes & Mayzlin, 2009; Kumar & Mirchandani, 2012). While the literature shows

that social media is a tool to engender WOM (Colliander & Dahlén, 2011), studies on how the type of medium will affect the public's response are limited. This study will test Facebook and blogs because both platforms have been proven to be tools to create supportive WOM intention (e.g., Swani et al., 2013; Yang & Kang, 2009).

In the crisis communication literature, secondary crisis communication, a similar concept to WOM intention, refers to message receivers' intentions to share, forward, or comment on the organization's crisis communication (Schultz et al., 2011). Scholars have looked at how the public generates online WOM in response to an online crisis communication (Schultz et al., 2011; Utz et al., 2013). In this study, positive WOM intention refers to the extent of the message receiver's intention to share the sustainability messages that organizations create or talk positively about them to others. To create the most effective message strategy, the interaction of all the variables should be considered. Therefore, this study will also look at the interactions between the factors.

Hypotheses & Research Questions

In this study, perceived social presence and a message recipient's intention to engage in positive WOM activities are used to measure the effectiveness of organizational sustainability communication. Figure 1 shows the conceptual model of the study. Based on the previous literature, this study posits the following hypotheses:

H1: The level of interactivity of an organization's sustainability communication message positively affects social presence.

H2: The level of interactivity of an organization's sustainability communication message positively affects positive WOM intention.

In particular, this study investigates how message appeal and type of medium influence the social presence of organization sustainability communication and message recipients' WOM intention regarding the message. In addition, the following research questions are proposed to test the interaction effect of three variables—interactivity, message appeal, and medium type—on the message receiver's perceived social presence and their positive WOM intention:

RQ1a: How is an organization's social presence affected by message appeal in an organization's sustainability communication message?

RQ1b: How is an organization's social presence affected by type of medium in an organization's sustainability communication message?

RQ2a: How is positive WOM intention affected by message appeal in an organization's sustainability communication?

RQ2b: How is positive WOM intention affected by type of medium in an organization's sustainability communication?

RQ3: What are the interaction effects of interactivity, message appeal, and medium type on (a) social presence and (b) positive WOM intention?

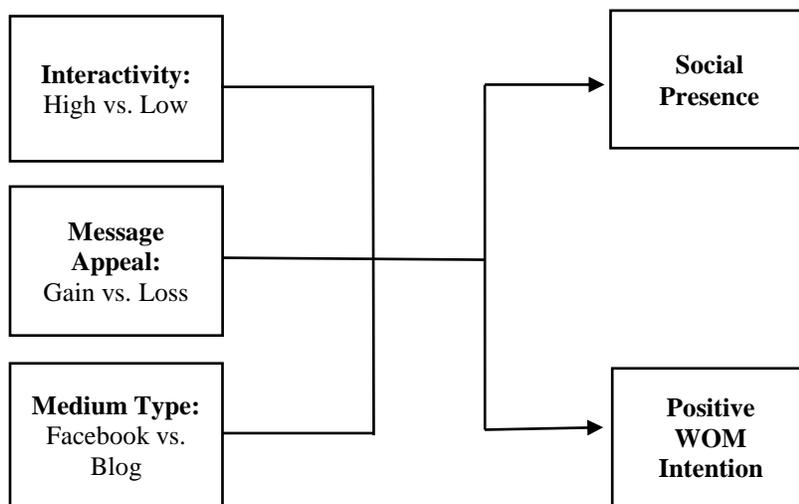


Figure 1 Conceptual Model of the Study

CHAPTER 3

METHODOLOGY

Stimulus Development

The purpose of this study is to find factors that influence the public's perceptions and responses in organizational sustainability communication. This study is a 2 (interactivity: high/low) x 2 (message appeal: gain-focused/loss-focused) x 2 (medium: Facebook/organizational blog) experimental survey. All three variables served as within-subjects factors. Following Van Liere and Dunlap's (1980) recommendation that environmental concern should be measured in relation to more specific issues, such as recycling and energy conservation, the messages mention forestry. This study created a mock Facebook page and a fictitious organizational blog. To avoid any prejudice from previous experience, a fictitious company called Mumu Cookie was created.

All the messages from the company promote its environmentally sustainable activities. In the messages, the company introduces a new paper-saving packaging design. In the case of gain-framed messages, the company emphasizes its potential to improve air quality by preventing a forest from being cut down. For the loss-framed message, the message describes how not engaging in the operational change may cause deforestation, which will degrade air quality. The Facebook statuses and blog posts with high interactivity were slightly longer to resemble a conversational human voice. Such extra sentences include "Hi, it's Tina from the Mumu Sustainability team" and "Don't hesitate to contact me (tina.sustain@mumucookie.com) if you

have any questions!” A total of eight messages were generated. All messages were made to look as similar as possible to avoid any misperception. See Table 3 for the list of the stimuli.

Table 3. Stimuli and Number of Participants

Interactivity	Message appeal	Medium	N
High	Gain	Facebook	51
		Blog	47
	Loss	Facebook	48
		Blog	48
Low	Gain	Facebook	46
		Blog	52
	Loss	Facebook	53
		Blog	49

Measures

Manipulation check. To measure the manipulation of interactivity, this study measured perceived interactivity as suggested by previous literature (e.g., Thorson & Rodgers, 2006). If individuals perceive the high interactivity message to be more interactive than the low interactivity message, the manipulation can be considered successful. Message recipient’s perceived interactivity was measured to check the manipulation success of interactivity. On a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), survey participants were asked to report the extent of interactivity they perceived reading the messages with seven items adapted from Thorson and Rodgers (2006): “Interacting with this online message was like having a conversation with a representative of the company,” “I felt as if this message talked back to me while I was reading the message,” “I perceived the message to be sensitive to my needs for information,” “The company’s message is interpersonal,” “I could communicate directly to the company if I wanted to,” “The company’s message is interactive (e.g., has hyperlink that I can click, wants me to engage in a conversation),” and “The company’s message had the ability to

respond to my specific questions quickly and efficiently.” There was significant mean difference in the high interactivity ($M = 5.29, SD = .87$) and low interactivity ($M = 4.65, SD = 1.06$) conditions [$t(392) = 6.464, p = .023$].

Message appeal was assessed by a ten-point semantic differential scale with endpoints of 1 = “The message discussed the potential for negative consequences in environmental quality without its packaging change” and 10 = “The message discussed the potential for positive changes in environmental quality with its packaging change.” There was a significant mean difference in the loss ($M = 5.59, SD = 3.674$) and gain ($M = 9.10, SD = 1.1411$) conditions [$t(392) = 12.497, p < .001$].

Interactivity. Interactivity was operationalized as the addition of hyperlinks and a conversational human voice to an organization’s website. The low interactivity condition did not have a hyperlink, but the high interactivity condition had one that led to the sustainability tab of the company website. In addition, to provide human interactivity, the message with high interactivity was written as if by a staff member whereas the low interactivity message was written in third person. In terms of conversational human voice (Kelleher, 2007), the tone was manipulated by using different forms of narrative. For example, the high interactivity in a conversational human voice was written as a first-person narrative with informal greetings such as “hi” and exclamation marks. The writer’s personal contact information was added to make the messages friendlier. Those messages called the organization “we.” In the case of the message with low interactivity, third-person narratives were used and the organization is called “it.” Seven questions adapted from Thorson and Rodgers (2006) were asked to measure the perceived conversational human voice of the message: “Interacting with this online message was like having a conversation with a representative of the company,” “I felt as if this message talked

back to me while I was reading the message,” “I perceived the message to be sensitive to my needs for information,” “The company’s message is interpersonal,” “I could communicate directly to the company if I wanted to,” “The company’s message is interactive (e.g., has hyperlink that I can click, wants me to engage in a conversation),” and “The company’s message had the ability to respond to my specific questions quickly and efficiently” ($\alpha = .858$).

Message appeal. Message appeal in this study concerns whether the message emphasizes potential harm by not engaging in organization’s sustainable activities (loss-framed) or promotes environmental benefits achieved by the organization’s green initiatives (gain-framed; Davis, 1995). To test the reliability of the stimuli, this study adopted Kim’s (2006) manipulation check method. Respondents were asked the extent to which they think the scenarios discussed the potential for negative consequences in environmental quality without its green initiatives (loss-framed appeals) or the potential for positive changes in environmental quality with its green initiatives (gain-framed appeals). The scale ranges from 1 = *definitely not* to 10 = *definitely yes*.

Type of medium. Type of medium indicates the tool through which the mediated environmental sustainability message is conveyed. The effects of organizational sustainability communication via Facebook and blog were experimentally examined in this study. Screenshots of a mock Facebook page and a mock corporate blog were shown to participants. The Facebook page includes “like,” comment, and share features, while the blog page has comment and share features (See Appendix A).

Social presence. Social presence is defined as the sense of being there, especially in the online environment (Lombard & Ditton, 1997). In this study, the message receiver’s perceived closeness to the organization after reading the message is considered social presence. To measure social presence, participants were asked to rate how they feel about the organization based on the

messages they read. Seven 7-point bipolar items by Short et al. (1976) were used to measure social presence: impersonal/personal, unsociable/sociable, boring/interesting, not appealing/appealing, non-interactive/interactive, dehumanizing/humanizing, and non-immediate/immediate ($\alpha = .917$).

Positive WOM intention. Positive WOM intention refers to recipients' intentions to share the messages they read with their family and friends. Three questions were asked to measure respondents' intention to engage in positive WOM (Schultz, Utz, & Goritz, 2011): "I would 'like' the company's message," "I would share the company's message with other people," and "I would tell my family and friends about the sustainable performance(s) the organization is doing" ($\alpha = .844$).

Control Variables

As previous literature has shown that demographic variables are associated with an individual's environmental issues engagement (e.g., Gaspar & Antunes, 2011; Song, Wang, & Li, 2012), such variables were measured and controlled in the analysis. Researchers have found differences in responsible environmental behavior depending on gender (e.g., Gaspar & Antunes, 2011; Fiorillo, 2013) and age (e.g., Domina & Koch, 2002; Song et al., 2012).

Participant Recruitment

Procedure. The survey used in this study was designed on Qualtrics, a website used to create and collect survey data. The survey was distributed in Amazon Mechanical Turk (MTurk), a site that individuals can use to participate in surveys and receive incentives. MTurk is a new technical tool to obtain high-quality data (Buhrmester, Kwang, & Gosling, 2011). MTurk users who click on the survey link first viewed an informed consent statement and were asked for consent to continue with the survey. All participants had to be 18 years or older to participate in

the survey. If a survey respondent was younger than 18 years old, his or her survey results were not counted. First, participants were asked questions regarding their social media and blog usage in order to see whether their prior dispositions affected the perceived effectiveness of sustainability messages.

After the questions were asked, participants were exposed to one of eight organizational sustainability communication messages from a fictitious cookie company. The food industry is suitable for this study because being sustainably responsible in the industry brings out a wide range of potential benefits (Kong, 2012). The messages were created with InDesign to resemble an actual company's Facebook page or blog. After reading a message, the participants were asked to answer questions about the company and its message. Participants were asked to rank the perceived social presence of the message they read and the extent to which they would engage in online communication with others regarding the message. To measure the effectiveness of the stimulus, each participant was asked to answer a question to measure message appeal. Demographic variables such as education and income were collected. After answering all the questions, respondents were provided with a debriefing message saying that all the stimuli were created by the researcher to conduct a study on message effectiveness. Respondents had the choice to decline to submit their answers after reading the debriefing message.

CHAPTER 4

RESULTS

Interactivity, Message Appeal, Media Type on Social Presence

A three-way analysis of variance (ANOVA) was performed to test the influence of interactivity, message appeal, and medium type on social presence. The first hypothesis proposed that the level of interactivity in an organization's sustainability communication message positively affects social presence. There was a significant main effect of interactivity on social presence as hypothesized [$F(7, 386) = 15.177, p < .001, \eta_p^2 = .038$]. Higher interactivity messages ($M = 5.77$) engendered greater perceptions that the stimulus was personal, sociable, interesting, appealing, interactive, humanizing, and immediate than did the low interactive ones ($M = 5.31$). Therefore, H1 was supported.

The first two research questions asked how an organization's social presence is affected by message appeal and by medium type. Gain-framed messages had higher social presence ($M = 5.67$) than loss-framed messages ($M = 5.41$) [$F(7, 386) = 4.421, p = .036, \eta_p^2 = .011$]. However, there was no significant difference in social presence between Facebook and the blog [$F(7, 386) = 1.894, p = .170, \eta_p^2 = .005$].

Interactivity, Message Appeal, Media Type on Positive WOM Intention

Another three-way ANOVA was performed to test the influence of interactivity, message appeal, and medium type on positive WOM intention. There was a significant main effect from interactivity on positive WOM intention as hypothesized [$F(7, 386) = 4.162, p = .042, \eta_p^2 = .011$]. The messages with higher interactivity ($M = 5.339$) engendered greater positive WOM

intention about the organization and its sustainable activity than messages with lower interactivity ($M = 5.095$). Therefore, H2 was supported.

Research questions 2a and 2b asked whether the message appeal and medium type affect positive WOM intention among message recipients. The result indicated that gain-framed messages had higher WOM intention ($M = 5.362$) than loss-framed messages ($M = 5.073$) [$F(7, 386) = 5.844, p = .016, \eta_p^2 = .015$]. However, there was no significant difference between Facebook and blog on positive WOM intention among the message receivers [$F(7, 386) = 1.857, p = .174, \eta_p^2 = .005$]. Table 4 shows the correlations for the dependent variables and Table 5 shows the result of the ANOVA analyses.

Table 4. Inter-item Correlation for Dependent Variables

	Social Presence	WOM intention
Social Presence	-	
WOM intention	.447**	-

Note. * $p < .05$; ** $p < .01$.

Table 5. Means, Numbers, and Univariate F values of Dependent Variables

Independent variables	Dependent variables: means, numbers, and univariate F values					
	Social Presence			Positive WOM Intention		
	Mean	n	F	Mean	N	F
Interactivity			15.177**			4.162*
High	5.772	196		5.339	196	
Low	5.305	198		5.095	198	
Message appeal			4.421*			5.844*
Gain	5.665	194		5.362	194	
Loss	5.412	200		5.073	200	
Medium			1.894			1.857
Facebook	5.621	198		5.298	198	
Blog	5.457	196		5.136	196	

Note. * $p < .05$; ** $p < .01$.

Interaction Effects on Social Presence and Intended Word-of-Mouth

The third research question examined whether there are any two-way or three-way interaction effects among interactivity, message appeal, and type of medium on social presence or on positive WOM intention. Multivariate analysis of variance (MANOVA) revealed that there

was no two-way interaction among the variables, but there was a significant three-way interaction effect of the variables on WOM intention [$F(7, 386) = 5.764, p = .042, \eta_p^2 = .011$]. The high interactivity and gain-framed messages on Facebook ($M = 5.475$) had the highest positive WOM intentions among the message receivers. The lowest WOM intention was for the message with low interactivity that used loss-framed appeals on Facebook ($M = 4.855$). Figure 2 shows the three-way interaction result.

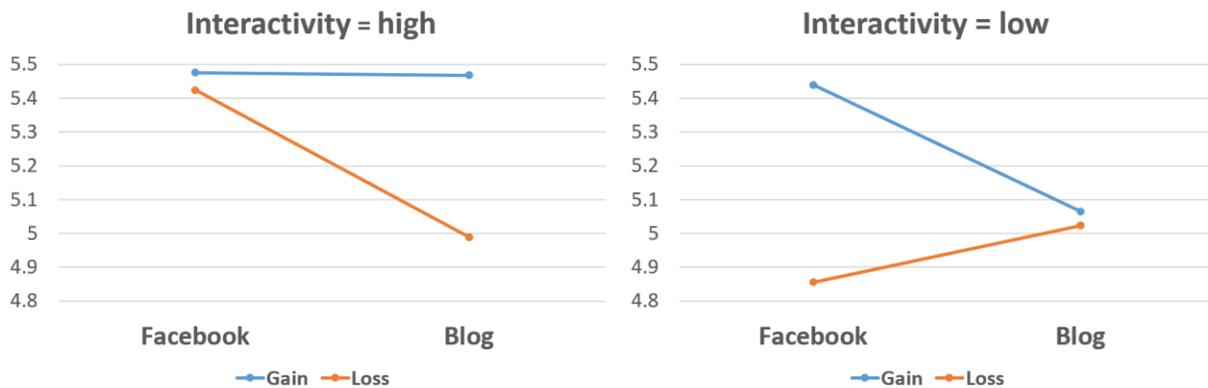


Figure 2 Interaction Effect on Word-of-Mouth Intention

CHAPTER 5

DISCUSSION

The public's perceptions and reactions to a corporate message depend on several factors. Understanding which factors can enhance the social presence of online messages and WOM intention of publics has been an important agenda in corporate communication. Although some fields such as crisis communication have investigated important factors related to message effectiveness, studies of sustainability communication and its message effectiveness are limited. This study was designed to examine the effects of interactivity, message appeal, and type of medium on messages' perceived social presence and message receivers' WOM intention.

Social Presence

The first hypothesis posits that a higher level of interactivity in organizational sustainability communication positively affects social presence. The results support the proposition and align with the previous findings that high interactivity messages engender greater social presence among message recipients (Short et al., 1976). Conversational human voice makes the messages personal and sociable by increasing the possibility that the recipients feel as if the message writer is present with them. In addition, hyperlinks that users can click on will increase their psychological involvement (Cui, Wang, & Xu, 2010). A persona and extra hyperlinks in messages can increase the social presence of the organizational sustainability communication messages. Studies have demonstrated that greater social presence increases satisfaction with the communication experience (Gunawardena & Zittle, 1997; Kaplan & Haenlein, 2010) and trust in the organization (e.g., Beldad et al., 2010; Gefen & Straub, 2004).

The contrast between the effects of gain-framed and loss-framed appeals on social presence underlines the importance of message appeal in organizational sustainability communication. Social presence can vary within the same communication channel depending on contextual factors (Short et al., 1976), in this case the appeals of the messages. In this study, messages written in a gain-framed style have higher social presence than those written in a loss-framed style. This suggests that when organizations communicate about sustainability, they should emphasize the potential benefits their actions will create rather than focusing on the harms they may cause by not engaging in sustainable activities.

Given that much organizational communication is delivered via online platform, examining the effect of type of medium is important. Different media platforms naturally have varied social presence (Short et al., 1976). Because of their characteristics, blogs are considered to have a lower social presence than social networking sites (Kaplan & Haenlein, 2010); however, in the current study, type of medium did not affect social presence in the organizational sustainability communication context. One possible explanation for this result can be found in an online education study that demonstrates that it is the interaction with other message recipients that makes the medium interactive, active, interesting, and stimulating, not the medium itself (Gunawardena, 1995). Therefore, providing opportunities to interact with other message receivers may increase a company's social presence.

Positive WOM Intention

The second hypothesis claimed that a higher level of interactivity in organizational sustainability communication would significantly affect the public's positive WOM intention. To generate long-term relationships with publics, engaging in constant dialogical communication and interaction is crucial (Taylor, Kent, & White, 2001). WOM communication is important,

especially in online communication, because of technological advances that allow stakeholders to share their perspectives and experiences with organizations with others broadly and quickly. The increased number of visitors to organizations' social networking sites and blogs to look at their green initiatives is giving organizations and scholars a greater sense of the importance of positive WOM. By providing interactive features such as conversational human voice or extra hyperlinks, organizations can elicit supportive behavior intentions from their stakeholders. Consequently, organizations can build stronger relationships with stakeholders or gain new ones as a result of having positive WOM (Woisetschlager, Lentz, & Evanschitzky, 2011). From the results, it can be concluded that to build positive relationships with their publics, organizations should consider the interactivity of their messages to communicate their green initiatives.

The appeal of a message makes a significant difference in behavior intentions. According to Ahn, Fox, Dale, and Avant (2014), in the context of environmental issues, gain-framed messages will have more influence on the behavioral intention of message recipients than loss-framed messages. The findings of the current study added to previous research by demonstrating that gain-framed messages generate higher positive WOM intention among message recipients than loss-framed messages. The result also aligns with previous literature on how message appeal manipulation can influence public intention to engage in environmentally responsible behavior (Davis, 1997). Among message recipients, messages written in a gain-framed style have higher WOM intention than those written in a loss-framed one. This suggests that publics are more willing to share positively framed messages with their friends and family.

However, type of medium does not affect positive WOM intention toward the organization. This result conflicts with previous findings in studies in crisis communication (Schultz et al., 2011; Utz et al., 2013). A possible explanation might be the different contexts of

the messages and different types of media compared. In some cases of crisis communication, the consequence of a problem or issue is immediate (e.g., plane crashes, explosions, etc.). The unique characteristics of crisis communication may cause social networking sites to be perceived as a more effective media tool than blogs. Environmental problems usually take a longer time to manifest their results. Another reason why there was no difference between Facebook and blog messages may be explained by advances in blog features. Blogs used to have features such as comments and RSS, but with technology advances, blogs now have features such as share on Facebook, Twitter, and other SNSs, which makes blogs more connectable with other SNSs. Hence, the type of medium is relatively less significant compared to the effect of interactivity or appeal of the message.

Interactions between Interactivity, Message Appeal, and Type of Medium

The only significant interaction occurred when interactivity, message appeal, and type of medium were all accounted for together on WOM intention. Specifically, positive WOM intention toward an organization is best conveyed through interactive and gain-framed appeals on Facebook. Recipients of such messages are more likely to engage in message sharing, liking, or talking to their friends or family. This result indicates that type of medium has an impact when a message conveys both interactivity and message appeal in its context.

This study initiated an effort to find the determinants of effective organizational sustainability communication in mediated communications. In summary, this study offered empirical evidence of the positive role of interactivity and message appeal in the social presence of organization sustainability communication and of their effect on message recipients' positive WOM intention. This study contributes to the knowledge of the practice of sustainability communications. The results suggest that when an organization strives to promote its sustainable

activities, a message with high interactivity and gain-framed appeals on Facebook will likely generate higher positive WOM intention.

Limitations and Future Research

This study has several limitations. First, the respondents looked only at the captured messages from an organization. Interactivity is an active procedure rather than a particular state at a moment (Yang & Lim, 2009). For that reason, individuals' perceptions might change when they engage in actual conversations with the company. Second, if the participants were able to interact with other message recipients' comments on the stimuli, the results might have been different. In other words, there were no responses or immediate reaction from the message. Even though the study provided a hyperlink to a website for more information, the respondents were not able to actually click on the link to read the web page and receive more information because the stimulus was a screenshot of a mock-up page. This limitation may have reduced the accuracy of the measure of interactivity. Last, the length of the stimulus was slightly different between the high and low interactivity messages. Even though the content of the messages was similar, the high interactivity messages consisted of two or three more sentences to resemble a conversational human voice, such as extra greetings, the writer's contact information, and hyperlinks.

Given that the present analysis was based on only three variables, future researchers could examine other variables which may enhance the social presence of messages and the message receiver's positive WOM intentions for organizations, such as organizational reputation. They could also focus on individual differences in perceived message effectiveness. For example, personality traits of individuals can affect positive WOM intentions and the level of

perceived social presence of messages. Finally, future researchers should consider other interactive media tools such Twitter and online newspapers.

REFERENCES

- Ahern, R. K., & Stromer-Galley, J. (2000, June). The interaction effect: An experimental study of high and low interactivity political Websites. In *50th annual conference of the International Communication Association, Acapulco, Mexico*.
- Ahn, S. J. G., Fox, J., Dale, K. R., & Avant, J. A. (2014). Framing virtual experiences effects on environmental efficacy and behavior over time. *Communication Research*, 0093650214534973.
- Ahuja, V., & Medury, Y. (2010). Corporate blogs as e-CRM tools—Building consumer engagement through content management. *Journal of Database Marketing & Customer Strategy Management*, 17(2), 91-105.
- Alexandrov, A., Lilly, B., & Babakus, E. (2013). The effects of social-and self-motives on the intentions to share positive and negative word of mouth. *Journal of the Academy of Marketing Science*, 41(5), 531-546.
- Baker, S., & Green, H. (2005). Blogs will change your business. *Business Week*, 3931(5).
- Bansal, P. (2005). Evolving sustainably: A longitudinal study of corporate sustainable development. *Strategic management journal*, 26(3), 197-218.
- Bardwell, L. V. (1991). Problem-framing: A perspective on environmental problem-solving. *Environmental Management*, 15(5), 603-612.
- Becker, E., Jahn, T., & Stiess, I. (1999). Exploring uncommon ground: sustainability and the social sciences. *Sustainability and the Social Sciences. A cross-disciplinary approach integrating environmental considerations into theoretical reorientation*, London (Zed Books), 1-22.
- Beldad, A., De Jong, M., & Steehouder, M. (2010). How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust. *Computers in Human Behavior*, 26(5), 857-869.
- Bell, J., Masaoka, J., & Zimmerman, S. (2010). Nonprofit sustainability: Making strategic decisions for financial viability. John Wiley & Sons.
- Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a more robust theory and measure of social presence: Review and suggested criteria. *Presence*, 12(5), 456-480.
- Blattberg, R. C., & Deighton, J. (1991). Interactive marketing: Exploiting the age of addressability. *Sloan management review*, 33(1), 5.

- Block, L. G., & Keller, P. A. (1995). When to accentuate the negative: The effects of perceived efficacy and message appeal on intentions to perform a health-related behavior. *Journal of marketing research*, 192-203.
- Bortree, D. S. (2009). The impact of green initiatives on environmental legitimacy and admiration of the organization. *Public Relations Review*, 35(2), 133-135.
- Bryant, F. B. (1989). A Four-Factor Model of Perceived Control: Avoiding, Coping, Obtaining, and Savoring. *Journal of personality*, 57(4), 773-797.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data? *Perspectives on psychological science*, 6(1), 3-5.
- Castronovo, C., & Huang, L. (2012). Social media in an alternative marketing communication model. *Journal of Marketing Development and Competitiveness*, 6(1), 117.
- Cheung, C. M., Chiu, P. Y., & Lee, M. K. (2011). Online social networks: Why do students use Facebook? *Computers in Human Behavior*, 27(4), 1337-1343.
- Cho, C. H., & Leckenby, J. D. (1999). Interactivity as a measure of advertising effectiveness. In *Proceedings of the American Academy of Advertising* (pp. 162-179). Gainesville, FL: University of Florida.
- Colliander, J., & Dahlén, M. (2011). Following the fashionable friend: The power of social media. *Journal of Advertising Research*, 51(1), 313-320.
- Cui, N., Wang, T., & Xu, S. (2010). The influence of social presence on consumers' perceptions of the interactivity of web sites. *Journal of Interactive Advertising*, 11(1), 36-49.
- Cyr, D., Hassanein, K., Head, M., & Ivanov, A. (2007). The role of social presence in establishing loyalty in e-service environments. *Interacting with computers*, 19(1), 43-56.
- Davis, J. J. (1995). The effects of message appeal on response to environmental communications. *Journalism & Mass Communication Quarterly*, 72(2), 285-299.
- Dawson, V. R. (2015). "Who are we Online?" Approaches to Organizational Identity in Social Media Contexts. *The Journal of Social Media in Society*, 4(2).
- Day, G. S. (1971). Attitude change, media and word of mouth. *Journal of Advertising Research*.
- Dean, D. H. (2003). Consumer perception of corporate donations effects of company reputation for social responsibility and type of donation. *Journal of Advertising*, 32(4), 91-102.
- Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business research*, 56(6), 465-480.

- Domina, T., & Koch, K. (2002). Convenience and frequency of recycling implications for including textiles in curbside recycling programs. *Environment and behavior*, 34(2), 216-238.
- Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California management review*, 36(2), 90.
- Fairridge Group (2009, August 20). Social networking a key part of your sustainability communication strategy. *TriplePundit*. Retrieved from <http://www.triplepundit.com/2009/08/social-networking-a-key-part-of-your-sustainability-communications-strategy/>
- Fink, S. (1986). *Crisis management: Planning for the inevitable*. American Management Association.
- Fiorillo, D. (2013). Household waste recycling: national survey evidence from Italy. *Journal of Environmental Planning and Management*, 56(8), 1125-1151.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitudes, intention, and behavior. *An introduction to theory and research*. Massachusetts: Addison-Wesley.
- Fortin, D. R., & Dholakia, R. R. (2005). Interactivity and vividness effects on social presence and involvement with a web-based advertisement. *Journal of business research*, 58(3), 387-396.
- Gaspar, R., & Antunes, D. (2011). Energy efficiency and appliance purchases in Europe: Consumer profiles and choice determinants. *Energy Policy*, 39(11), 7335-7346.
- Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. *Omega*, 32(6), 407-424.
- Giddings, B., Hopwood, B., & O'Brien, G. (2002). Environment, economy and society: fitting them together into sustainable development. *Sustainable development*, 10(4), 187-196.
- Gill, J. D., Crosby, L. A., & Taylor, J. R. (1986). Ecological concern, attitudes, and social norms in voting behavior. *Public Opinion Quarterly*, 50(4), 537-554.
- Gilley, K. M., Worrell, D. L., Davidson, W. N., & El-Jelly, A. (2000). Corporate environmental initiatives and anticipated firm performance: the differential effects of process-driven versus product-driven greening initiatives. *Journal of management*, 26(6), 1199-1216.
- Godes, D., & Mayzlin, D. (2004). Using online conversations to study word-of-mouth communication. *Marketing science*, 23(4), 545-560.
- GroSocial (n.d.) *Why every business should use Facebook*. Retrieved from <http://www.grosocial.com/graphics/facebook-numbers-help/>

- Gunawardena, C. N. (1995). Social presence theory and implications for interaction and collaborative learning in computer conferences. *International journal of educational telecommunications*, 1(2), 147-166.
- Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *American journal of distance education*, 11(3), 8-26.
- Hall, J. A. (1980). Voice tone and persuasion. *Journal of Personality and Social Psychology*, 38(6), 924.
- Hansson, L., Wrangmo, A., & Solberg Søylen, K. (2013). Optimal ways for companies to use Facebook as a marketing channel. *Journal of Information, Communication and Ethics in Society*, 11(2), 112-126.
- Hayward, R., Lee, J., Keeble, J., McNamara, R., Hall, C., Cruse, S., Gupta, P., & Robinson, E. (2013). The UN Global Compact-Accenture CEO Study on Sustainability 2013. UN Global Compact Reports, 5(3), 1-60.
- Heeter, C. (1989). Implications of new interactive technologies for conceptualizing communication. *Media use in the information age: Emerging patterns of adoption and consumer use*, 217-235.
- Helfgott, J. & Ludke, R. (2015). The business imperative to effective sustainability reporting. *Quantified Communications*. Retrieved from <http://www.quantifiedcommunications.com/blog/the-business-imperative-to-effective-sustainability-reporting/>
- Henriques, I., & Sadowsky, P. (1999). The relationship between environmental commitment and managerial perceptions of stakeholder importance. *Academy of management Journal*, 42(1), 87-99.
- Herr, P. M., Kardes, F. R., & Kim, J. (1991). Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnostics perspective. *Journal of consumer research*, 454-462.
- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of environmental education*, 18(2), 1-8.
- Hoffman, D. L., & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: Conceptual foundations. *The Journal of Marketing*, 50-68.
- Homer, P. M., & Yoon, S. G. (1992). Message appeal and the interrelationships among ad-based feelings, affect, and cognition. *Journal of Advertising*, 21(1), 19-33.

- Huang, H. Y. (2002). *Effects of interactivity and expressiveness on perceived social presence, memory and persuasion in interactive health communications* (Doctoral dissertation, University of North Carolina at Chapel Hill).
- Hunt, D., Atkin, D., & Krishnan, A. (2012). The influence of computer-mediated communication apprehension on motives for Facebook use. *Journal of Broadcasting & Electronic Media*, 56(2), 187-202.
- Jo, S., & Kim, Y. (2003). The effect of web characteristics on relationship building. *Journal of Public Relations Research*, 15(3), 199-223.
- Jose, A., & Lee, S. M. (2007). Environmental reporting of global corporations: A content analysis based on website disclosures. *Journal of Business Ethics*, 72(4), 307-321.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, 53(1), 59-68.
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal Influence, The part played by people in the flow of mass communications*. Transaction Publishers.
- Kelleher, T., & Miller, B. M. (2006). Organizational blogs and the human voice: Relational strategies and relational outcomes. *Journal of Computer-Mediated Communication*, 11(2), 395-414.
- Kelleher, T. (2009). Conversational voice, communicated commitment, and public relations outcomes in interactive online communication. *Journal of Communication*, 59(1), 172-188.
- Kent, M. L., Taylor, M., & White, W. J. (2003). The relationship between Web site design and organizational responsiveness to stakeholders. *Public Relations Review*, 29(1), 63-77.
- Kerkhof, P., Beugels, D., Utz, S., & Beukeboom, C. J. (2011, May). Crisis PR in social media: An experimental study of the effects of organizational crisis responses on Facebook. In *Presentation at SWOCC conference in Amsterdam* (Vol. 13).
- Ki, E. J., & Shin, S. (2015). Organization sustainability communication (OSC): Similarities and differences of OSC messages in the United States and South Korea. *Computers in Human Behavior*, 48, 36-43.
- Ki, E. J., Shin, S., & Oh, J. (2015, August). *The state of sustainability communication research: An analysis of published studies in the mass communication disciplines from 1973-2014*. Paper presented at the Annual Association for Education in Journalism and Mass Communication Conference, San Francisco, CA. Abstract retrieved from: <http://www.aejmc.org/home/2015/06/mcs-2015-abstracts/>
- Kim, Y. J. (2006). The role of regulatory focus in message appeal in antismoking advertisements for adolescents. *Journal of Advertising*, 35(1), 143-151.

- Kiousis, S. (2002). Interactivity: a concept explication. *New media & society*, 4(3), 355-383.
- Koetsier, John (2013, March 5) *Facebook: 15 million businesses, companies, and organizations now have a Facebook page*. Retrieved from <http://venturebeat.com/2013/03/05/facebook-15-million-businesses-companies-and-organizations-now-have-a-facebook-page/>
- Kolk, A. (2003) Trends in sustainability reporting by the Fortune Global 250, *BusinessStrategy and the Environment*, Vol. 12, No. 5, pp.279–291.
- Kolk, A. (2004). A decade of sustainability reporting: developments and significance. *International Journal of Environment and Sustainable Development*, 3(1), 51-64.
- Kong, D. (2012). Does corporate social responsibility matter in the food industry? Evidence from a nature experiment in China. *Food Policy*, 37(3), 323-334.
- Kumar, V., & Mirchandani, R. (2012). Increasing the ROI of social media marketing. *MIT sloan management review*, 54(1), 55.
- Lee, K. T., & Koo, D. M. (2012). Effects of attribute and valence of e-WOM on message adoption: Moderating roles of subjective knowledge and regulatory focus. *Computers in Human Behavior*, 28(5), 1974-1984.
- Lee, E. J., & Shin, S. Y. (2012). Are they talking to me? Cognitive and affective effects of interactivity in politicians' Twitter communication. *Cyberpsychology, Behavior, and Social Networking*, 15(10), 515-520.
- Levin, I. P., & Gaeth, G. J. (1988). How consumers are affected by the framing of attribute information before and after consuming the product. *Journal of consumer research*, 374-378.
- Lombard, M., & Ditton, T. (1997). At the heart of it all: The concept of presence. *Journal of Computer-Mediated Communication*, 3(2), 265.
- Maheswaran, D., & Meyers-Levy, J. (1990). The influence of message appeal and issue involvement. *Journal of Marketing research*, 361-367.
- Maibach, E. (1993). Social marketing for the environment: using information campaigns to promote environmental awareness and behavior change. *Health promotion international*, 8(3), 209-224.
- Manetti, G., & Bellucci, M. (2016). The Use of Social Media for Engaging Stakeholders in Sustainability Reporting. *Accounting, Auditing & Accountability Journal*, 29(8).
- Men, L. R. (2015). The internal communication role of the chief executive officer: Communication channels, style, and effectiveness. *Public Relations Review*, 41(4), 461-471.

- Meyers-Levy, J., & Maheswaran, D. (2004). Exploring message appeal outcomes when systematic, heuristic, or both types of processing occur. *Journal of Consumer Psychology, 14*(1), 159-167.
- McLuhan, M., & Fiore, Q. (1967). The medium is the message. *New York, 123*, 126-128.
- McMillan, S. J. (2006). Exploring models of interactivity from multiple research traditions: Users, documents, and systems. *The handbook of new media*, 205-229.
- Murray, K. B. (1991). A test of services marketing theory: consumer information acquisition activities. *The journal of marketing, 10*-25.
- Newman, C. L., Howlett, E., Burton, S., Kozup, J. C., & Heintz Tangari, A. (2012). The influence of consumer concern about global climate change on framing effects for environmental sustainability messages. *International Journal of Advertising, 31*(3), 511-527.
- Obermiller, C. (1995). The baby is sick/the baby is well: A test of environmental communication appeals. *Journal of Advertising, 24*(2), 55-70.
- Park, H., & Cameron, G. T. (2014). Keeping It Real Exploring the Roles of Conversational Human Voice and Source Credibility in Crisis Communication via Blogs. *Journalism & Mass Communication Quarterly, 1077699014538827*.
- Park, H., & Lee, H. (2013). Show us you are real: The effect of human-versus-organizational presence on online relationship building through social networking sites. *Cyberpsychology, Behavior, and Social Networking, 16*(4), 265-271
- Pelletier, L. G., & Sharp, E. (2008). Persuasive communication and proenvironmental behaviours: How message tailoring and message appeal can improve the integration of behaviours through self-determined motivation. *Canadian Psychology/Psychologiecanadienne, 49*(3), 210.
- Rafaeli, S. (1988). Interactivity: From new media to communication. *Sage annual review of communication research: Advancing communication science, 16*(CA), 110-134.
- Robertson, M. (2014). *Sustainability principles and practice*. Routledge.
- Rothman, A. J., Bartels, R. D., Wlaschin, J., & Salovey, P. (2006). The strategic use of gain-and loss-framed messages to promote healthy behavior: How theory can inform practice. *Journal of communication, 56*(s1), S202-S220.
- Rothman, A. J., & Salovey, P. (1997). Shaping perceptions to motivate healthy behavior: the role of message appeal. *Psychological bulletin, 121*(1), 3.
- Saffer, A. J., Sommerfeldt, E. J., & Taylor, M. (2013). The effects of organizational Twitter interactivity on organization–public relationships. *Public Relations Review, 39*(3), 213-215.

- Saxton, G. D., & Waters, R. D. (2014). What do stakeholders like on Facebook? Examining public reactions to nonprofit organizations' informational, promotional, and community-building messages. *Journal of Public Relations Research*, 26(3), 280-299.
- Schultz, F., Utz, S., & Göritz, A. (2011). Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media. *Public relations review*, 37(1), 20-27.
- Scoble, R., & Israel, S. (2006). *Naked conversations: how blogs are changing the way businesses talk with customers*. John Wiley & Sons.
- Searls, D., & Weinberger, D. (2000). Markets are conversations. In R. Levine, C. Locke, D. Searls, & D. Weinberger (Eds.), *The cluetrain manifesto: The end of business as usual* (pp. 75–114). New York: Perseus.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of consumer Research*, 325-343.
- Sheth, J. N., Sethia, N. K., & Srinivas, S. (2011). Mindful consumption: a customer-centric approach to sustainability. *Journal of the Academy of Marketing Science*, 39(1), 21-39.
- Short, J., Williams, E., & Christie, B. (1976). The social psychology of telecommunications.
- Shrivastava, P., & Siomkos, G. (1989). Disaster containment strategies. *Journal of Business Strategy*, 10(5), 26-30.
- Smith, W. P., & Kidder, D. L. (2010). You've been tagged! (Then again, maybe not): Employers and Facebook. *Business Horizons*, 53(5), 491-499.
- Smith, S. M., & Petty, R. E. (1996). Message appeal and persuasion: A message processing analysis. *Personality and Social Psychology Bulletin*, 22, 257-268.
- Solis, B., & Breakenridge, D. K. (2009). *Putting the public back in public relations: How social media is reinventing the aging business of PR*. FT Press.
- Song, Q., Wang, Z., & Li, J. (2012). Residents' behaviors, attitudes, and willingness to pay for recycling e-waste in Macau. *Journal of environmental management*, 106, 8-16.
- Stead, J. G., & Stead, W. E. (2015). *Management for a small planet*. Routledge.
- Stuart, H., & Jones, C. (2004). Corporate branding in marketspace. *Corporate Reputation Review*, 7(1), 84-93.
- Sullivan, J. (1999). What are the functions of corporate home pages? *Journal of World Business*, 34(2), 193-210.

- Sundar, S. S., Hesser, K. M., Kalyanaraman, S., & Brown, J. (1998, July). The effect of Website interactivity on political persuasion. Paper presented at the 21st General Assembly and Scientific Conference of the International Association for Media and Communication Research, Glasgow, UK.
- Sundar, S. S., Kalyanaraman, S., & Brown, J. (2003). Explicating Web Site interactivity impression formation effects in political campaign sites. *Communication research*, 30(1), 30-59.
- Svensson, A. (2011). Facebook—the Social Newspaper that Never Sleeps-A study of Facebook eWOM’s persuasiveness on the receivers.
- Swani, K., Milne, G., & P. Brown, B. (2013). Spreading the word through likes on Facebook: Evaluating the message strategy effectiveness of Fortune 500 companies. *Journal of Research in Interactive Marketing*, 7(4), 269-294.
- Sweetser, K. D. (2010). A losing strategy: The impact of nondisclosure in social media on relationships. *Journal of Public Relations Research*, 22(3), 288-312.
- Sweetser, K. D., & Metzgar, E. (2007). Communicating during crisis: Use of blogs as a relationship management tool. *Public Relations Review*, 33(3), 340-342.
- Taylor, M., Kent, M. L., & White, W. J. (2001). How activist organizations are using the Internet to build relationships. *Public Relations Review*, 27(3), 263-284.
- Temminck, E., Mearns, K., & Fruhen, L. (2015). Motivating employees towards sustainable behaviour. *Business Strategy and the Environment*, 24(6), 402-412.
- Thorson, K. S., & Rodgers, S. (2006). Relationships between blogs as eWOM and interactivity, perceived interactivity, and parasocial interaction. *Journal of Interactive Advertising*, 6(2), 5-44.
- Tu, C. H., & McIsaac, M. (2002). The relationship of social presence and interaction in online classes. *The American journal of distance education*, 16(3), 131-150.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.
- Utz, S., Schultz, F., & Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review*, 39(1), 40-46.
- Van Liere, K. D., & Dunlap, R. E. (1980). The social bases of environmental concern: A review of hypotheses, explanations and empirical evidence. *Public opinion quarterly*, 44(2), 181-197.

- Walther, J. B., Van Der Heide, B., Kim, S. Y., Westerman, D., & Tong, S. T. (2008). The role of friends' appearance and behavior on evaluations of individuals on Facebook: Are we known by the company we keep? *Human communication research*, 34(1), 28-49.
- Waters, R. D., Burnett, E., Lamm, A., & Lucas, J. (2009). Engaging stakeholders through social networking: How nonprofit organizations are using Facebook. *Public relations review*, 35(2), 102-106.
- Weerawardena, J., McDonald, R. E., & Mort, G. S. (2010). Sustainability of nonprofit organizations: An empirical investigation. *Journal of World Business*, 45(4), 346-356.
- Westbrook, R. A. (1987). Product/consumption-based affective responses and postpurchase processes. *Journal of marketing research*, 25(3), 258-270.
- White, C., & Raman, N. (2000). The World Wide Web as a public relations medium: The use of research, planning, and evaluation in Web site development. *Public Relations Review*, 25(4), 405-419.
- Woisetschläger, D. M., Lentz, P., & Evanschitzky, H. (2011). How habits, social ties, and economic switching barriers affect customer loyalty in contractual service settings. *Journal of Business Research*, 64(8), 800-808.
- World Commission on Environment and Development (1987). *Our Common Future*, Oxford University Press, Oxford, UK.
- Wright, D. K. (2001). The magic communication machine: Examining the Internet's impact on public relations, journalism, and the public. *Institute for Public Relations*.
- Wu, G. (2005). The mediating role of perceived interactivity in the effect of actual interactivity on attitude toward the website. *Journal of Interactive advertising*, 5(2), 29-39.
- Yang, S. U., & Kang, M. (2009). Measuring blog engagement: Testing a four-dimensional scale. *Public Relations Review*, 35(3), 323-324.
- Yang, S. U., & Lim, J. S. (2009). The effects of blog-mediated public relations (BMPR) on relational trust. *Journal of Public Relations Research*, 21(3), 341-359.
- Yoo, S. W., & de Zúñiga, H. G. (2014). Connecting blog, Twitter and Facebook use with gaps in knowledge and participation. *Comunicación y Sociedad*, 27(4), 33.

APPENDIX A

EXPERIMENTAL STIMULI

Stimuli 1: High Interactivity X Gain X Facebook

The Mumu Cookie
Food/Beverages

Search for posts on this Page

10,509,954 people like this

Invite friends to like this Page

ABOUT

(800) 879-4785

<http://www.mumucookie.com>

The Mumu Cookie
11 hrs · 🌐

Hi, it's Tina from the Mumu Sustainability team! I have a good news to share with you guys!

Our plans to change our cookie packaging design are to be initiated this May! We want you to understand that we are trying our best to preserve and even improve the environment we value. The new wrapper, which is 0.50 grams less than the old wrapper, will save 10 million pounds of packaging material in five years. By making this change, we will not only save energy, but also will save about 2,000 trees per year, which is like a small forest. This change will enhance our quality of life through improved air quality.

We have more than 100 projects in process to preserve and improve the environment. What do you think about our progress? Share the news with your friends and comment if you have any suggestions for how else we can improve!

Please visit our website to learn more about the change: www.mumucookiecompany.com/better-environment-with-new-packaging, and don't hesitate to contact me (tina.sustain@mumucookie.com) if you have any questions!

Like Comment Share

Stimuli 2: High Interactivity X Gain X Blog

← → C www.mumucookie.com

The Mumu Cookie's Blog



Our Sustainability Efforts

We are Working Toward a Better Environment

Hi, it's Tina from the Mumu Sustainability team!
I have a good news to share with you guys!

Our plans to change our cookie packaging design are to be initiated this May! We want you to understand that we are trying our best to preserve and even improve the environment we value. The new wrapper, which is 0.50 grams less than the old wrapper, will save 10 million pounds of packaging material in five years. By making this change, we will not only save energy, but also will save about 2,000 trees per year, which is like a small forest. This change will enhance our quality of life through improved air quality.

We have more than 100 projects in process to preserve and improve the environment. What do you think about our progress? Share the news with your friends and comment if you have any suggestions for how else we can improve!

Please visit our website to learn more about the change: www.mumucookiecompany.com/better-environment-with-new-packaging, and don't hesitate to contact me (tina.sustain@mumucookie.com) if you have any questions!

Click to Comment

Categories

- Company News
- Events
- News Feed
- Product News
- Sustainability

Archive

- 2016
- 2015
- 2014
- 2013
- 2012

SHARE THIS PAGE

Sign up to receive sustainability updates from this organization



Stimuli 3: Low Interactivity X Gain X Facebook

The image shows a screenshot of a Facebook page for 'The Mumu Cookie'. The page header includes the Facebook logo, a search bar, and navigation links for 'Home' and 'Find Friends'. The profile picture is a chocolate chip cookie with the text 'The Mumu Cookie' overlaid. The cover photo features a pattern of various kitchen icons and the text 'The Mumu Cookie Food/Beverages'. On the left sidebar, there is a search bar for posts on the page, a notification that 10,509,954 people like this page, and an option to invite friends. Below that is an 'ABOUT' section with a right-pointing arrow, containing a phone number (800) 879-4785 and a website URL http://www.mumucookie.com. The main content area shows a post from 'The Mumu Cookie' made 11 hours ago. The post text reads: 'The Mumu Cookie Company plans to change its cookie packaging design starting this May. The new wrapper, which is 0.50 grams less than the old wrapper, will save 10 million pounds of packaging material in five years. This change is the company's first step towards preserving and even improving the environment people value. By making this change, the company will not only save energy, but also about 2,000 trees per year, which equates to a small forest. The operational change in the Mumu Cookie Company will enhance the quality of life through proving improved air quality. The Mumu Cookie Company has more than 100 projects in process to preserve and improve the environment.' At the bottom of the post are icons for 'Like', 'Comment', and 'Share'.

Stimuli 4: Low Interactivity X Gain X Blog

← → ↻ www.mumucookie.com

The Mumu Cookie Company, Inc. Blog



The Company's Sustainability Efforts

Mumu Cookie is Working Toward a Better Environment

The Mumu Cookie Company plans to change its cookie packaging design starting this May.

The new wrapper, which is 0.50 grams less than the old wrapper, will save 10 million pounds of packaging material in five years. This change is the company's first step towards preserving and even improving the environment people value.

By making this change, the company will not only save energy, but also about 2,000 trees per year, which equates to a small forest. The operational change in the Mumu Cookie Company will enhance the quality of life through improved air quality.

The Mumu Cookie Company has more than 100 projects in process to preserve and improve the environment.

Click to Comment

Categories

- Company News
- Events
- News Feed
- Product News
- Sustainability

Archive

- 2016
- 2015
- 2014
- 2013
- 2012

Stimuli 5: High Interactivity X Loss X Facebook

The Mumu Cookie
Food/Beverages

Search for posts on this Page

10,509,954 people like this

Invite friends to like this Page

ABOUT

(800) 879-4785

<http://www.mumucookie.com>

The Mumu Cookie
11 hrs · 🌐

Hi, it's Tina from the Mumu Sustainability team! I have a good news to share with you guys! Our plans to change our cookie packaging design are to be initiated this May! If we don't change our old wrapper to the new wrapper, which weighs 0.50 grams less than the old wrapper, we will waste 10 million pounds of packaging material in five years.

We are worried about a broad range of environmental problems that will occur without our change. For instance, we would only be ignoring continued environmental problems such as garbage and air pollution, but we would also losing 2,000 trees per year, which is like a small forest.

We have more than 100 projects in process because we know that once environmental resources are gone, it is difficult to recover. What do you think about our progress? Share the news with your friends and comment if you have any suggestions for how else we can stop environmental problems from getting worse.

Please visit our website to learn more about the change:
www.mumucookiecompany.com/preventing-environmental-problems-with-new-packaging, and don't hesitate to contact me (tina.sustain@mumucookie.com) if you have any questions!

Like Comment Share

Stimuli 6: High Interactivity X Loss X Blog

← → C www.mumucookie.com

The Mumu Cookie Blog

Our Sustainability Efforts

We Prevent Environmental Problems with New Pacakaging

Hi, it's Tina from the Mumu Sustainability team! I have a good news to share with you guys! Our plans to change our cookie packaging design are to be initiated this May! If we don't change our old wrapper to the new wrapper, which weighs 0.50 grams less than the old wrapper, we will waste 10 million pounds of packaging material in five years.

We are worried about a broad range of environmental problems that will occur without our change. For instance, we would only be ignoring continued environmental problems such as garbage and air pollution, but we would also losing 2,000 trees per year, which is like a small forest.

We have more than 100 projects in process because we know that once environmental resources are gone, it is difficult to recover. What do you think about our progress? Share the news with your friends and comment if you have any suggestions for how else we can stop environmental problems from getting worse.

Please visit our website to learn more about the change: www.mumucookiecompany.com/preventing-environmental-problems-with-new-packaging, and don't hesitate to contact me (tina.sustain@mumucookie.com) if you have any questions!

Click to Comment

Categories

- Company News
- Events
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- Sustainability

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- 2013
- 2012

SHARE THIS PAGE

Sign up to receive sustainability updates from this organization



Stimuli 7: Low Interactivity X Loss X Facebook

The screenshot shows a Facebook page for 'The Mumu Cookie'. The page header includes the Facebook logo, a search bar, and navigation links for 'Home' and 'Find Friends'. The profile picture is a chocolate chip cookie with the text 'The Mumu Cookie' overlaid. The cover photo is a dark blue banner with the text 'The Mumu Cookie Food/Beverages'. The left sidebar contains a search bar for posts on the page, a notification that 10,509,954 people like the page, an option to invite friends, and an 'ABOUT' section with contact information: a phone number (800) 879-4785 and a website URL http://www.mumucookie.com. The main content area features a post from 'The Mumu Cookie' dated 11 hours ago. The post text reads: 'The Mumu Cookie Company plans to change its packaging design starting this May. If the company does not change to the new wrapper, which is 0.50 grams less than the old wrapper, it will waste 10 million pounds of packaging material in five years. The company is worried about a broad range of environmental problems will occur without the change, such as ignoring continued environmental problems such as garbage and pollution and losing 2,000 trees per year, which equates to a small forest. In addition, without the operational change in the Mumu Cookie Company, the quality of life will diminish because of reduced air quality. The Mumu Cookie Company has more than 100 projects in process because they know once these resources are gone, they are difficult to recover.' Below the post are buttons for 'Like', 'Comment', and 'Share'.

Stimuli 8: High Interactivity X Loss X Blog

← → ↻ www.mumucookie.com

The Mumu Cookie Company, Inc. Blog



The Company's Sustainability Efforts Mumu Cookie Prevents Environmental Problems

The Mumu Cookie Company plans to change its packaging design starting this May.

If the company does not change to the new wrapper, which is 0.50 grams less than the old wrapper, it will waste 10 million pounds of packaging material in five years.

The company is worried about a broad range of environmental problems will occur without the change, such as ignoring continued environmental problems such as garbage and pollution and losing 2,000 trees per year, which equates to a small forest. In addition, without the operational change in the Mumu Cookie Company, the quality of life will diminish because of reduced air quality.

The Mumu Cookie Company has more than 100 projects in process because they know once these resources are gone, they are difficult to recover.

Categories

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APPENDIX B

QUESTIONNAIRE FOR THE MTURK SURVEY

Pre-test

The following questions ask about your usage of social networking sites. When answering these questions, please keep in mind the social networking site (such as Facebook) that you use the most.

1. The following questions ask about your usage of social media. Please rate how frequently you use the following social media platforms.
1=Never 2=Rarely 3=Occasionally 4=Frequently 5=Very Frequently
 - a. Facebook
 - b. Twitter
 - c. LinkedIn
 - d. Pinterest
 - e. Tumblr
 - f. Instagram
 - g. Flickr
 - h. Vinez
 - i. Yik Yak
 - j. Other social media (please specify)

2. Again, think of the social networking site you use most often. On a scale from 1 to 7 (where 1 is strongly disagree and 7 is strongly agree), indicate how much you agree or disagree with the following statements:
 - a. It helps me stay informed about current events and public affairs
 - b. I rely on it to stay in touch with friends and family
 - c. I use it to meet new people who share my interests
 - d. I trust the information that I get through social networking
 - e. It allows me to stay informed about my local community
 - f. It allows me to have discussions with people who have different views
 - g. It helps me to contact people I wouldn't meet otherwise
 - h. It helps me to find people I trust to solve problems in my community

3. The following questions ask about your usage of organizational blogs (e.g., Coca-cola's blog; Volvo's blog). Please rate how frequently you use the following organizational blogs.
1=Never 2=Rarely 3=Occasionally 4=Frequently 5=Very Frequently
 - a. For-profit organizational blog (e.g., M&M, Hyundai)
 - b. Nonprofit organizational blog (e.g., Autism Society of America)

4. Again, think of the organizational blog you visit most often. On a scale from 1 to 7 (where 1 is strongly disagree and 7 is strongly agree), indicate how much you agree or disagree with the following statements
 - a. It helps me stay informed about current events and announcements of the organization
 - b. I trust the information that I get through the organizational blog
 - c. It allows me to stay informed about information that is related to me
 - d. It allows me to stay informed about information that is not related to me
 - e. It allows me to have discussions with people who have different views

Please read the message from a cookie company, The Mumu Cookie Inc., carefully. You will be asked about the message. You will be able to answer the questions after a minute and half.

Post-test

Please read the following news story, and answer questions based on The Mumu Cookie’s message.

5. After reading the message from the Mumu Cookie, using a 10-point scale, to which side do you think explains better about Mumu Cookie? (1 to 10 scale points with end point of the sentences)
 - a. The message discussed the potential for “negative consequences” in environmental quality “without” packaging change (coded as 1)
 - b. The message discussed the potential for “positive changes” in environmental quality “with” packaging change (coded as 10)

6. After reading the message from *Mumu Cookie* on a scale from 1 to 7 (where 1 is strongly disagree and 7 is strongly agree), to what extent do you agree or disagree with the following statements?
 - a. Interacting with this online message was like having a conversation with a representative of the company
 - b. I felt as if this message talked back to me while I was reading the message
 - c. I perceived the message to be sensitive to my needs for information
 - d. The company’s message is interpersonal
 - e. I could communicate directly to the company if I wanted to
 - f. The company’s message is interactive (e.g., has hyperlink that I can click, wants me to engage in a conversation)
 - g. The company’s message had the ability to respond to my specific questions quickly and efficiently

7. After reading the message, *in my opinion, Mumu Cookie is:*
 1. Personal ____ : ____ : ____ : ____ : ____ : ____ : ____ Impersonal
 2. Sociable ____ : ____ : ____ : ____ : ____ : ____ : ____ unsociable
 3. Interesting ____ : ____ : ____ : ____ : ____ : ____ : ____ Boring
 4. Appealing ____ : ____ : ____ : ____ : ____ : ____ : ____ Not appealing
 5. Interactive ____ : ____ : ____ : ____ : ____ : ____ : ____ Non-interactive
 6. Humanizing ____ : ____ : ____ : ____ : ____ : ____ : ____ Dehumanizing

7. Immediate ____ : ____ : ____ : ____ : ____ : ____ : ____ Non-immediate
8. After reading the message from *Mumu Cookie* on a scale from 1 to 7 (where 1 is strongly disagree and 7 is strongly agree), to what extent do you agree or disagree with the following statements?
- I would “like” the company’s message(s)
 - I would share the company’s message(s) with other people
 - I would tell my family and friends about the sustainable performance(s) the organization is doing

Demographics

Finally, we have a few questions regarding demographic information. The information is required for statistical purposes only and will be kept strictly confidential.

9. What’s your gender?
- Male
 - Female
10. What is your age? _____
11. What is your ethnicity?
- White
 - Black or African-American
 - Asian or Pacific Islander
 - Mixed race
 - Native American/American Indian
 - Others _____
12. What’s your current education level?
- High school student
 - High school graduate or equivalent (e.g., GED)
 - Undergraduate
 - Bachelor’s degree
 - Master’s student
 - Master’s degree
 - PhD or professional (M.D., J.D., etc) degree student
 - PhD or professional degree
 - None of the above
13. What is your employment status?
- Employed full-time
 - Employed part-time
 - Self-employed
 - Homemaker
 - Student
 - Retired

- g. Not employed
- h. Other

14. Last year, what was your total family income from all sources, before taxes?

- a. Less than \$10,000
- b. \$10,000 to under \$20,000
- c. \$20,000 to under \$30,000
- d. \$30,000 to under \$40,000
- e. \$40,000 to under \$50,000
- f. \$50,000 or more
- g. Prefer not to answer

Debrief

The purpose of this study is to see how different variables affect effectiveness of organizational sustainability message. The company and online messages were fictitious and created by the investigator. If you have any questions you can contact Jeyoung Oh at joh11@crimson.ua.edu. The results of this survey are going to be used in nonprofit academic research. All of your responses and information will be kept confidential. If you would like to withdraw your answers, please do so at this point. If you would like to submit your answers, please click the submit button below. Thank you very much for your participation.

APPENDIX C

A Letter for IRB Approval



November 18, 2015

Jeyoung Oh
Department of Advertising and Public Relations
College of Communication & Information Sciences
The University of Alabama
Box 870172

Re: IRB # 15-OR-364 "Effectiveness of Organization Sustainability
Communication"

Dear Ms. Oh:

The University of Alabama Institutional Review Board has granted approval
for your proposed research

Your protocol has been given expedited approval according to 45 CFR part
46. You have also been granted the requested waiver of documentation of
informed consent. Approval has been given under expedited review category
7 as outlined below:

*(7) Research on individual or group characteristics or behavior (including, but not limited
to, research on perception, cognition, motivation, identity, language, communication, cultural
beliefs or practices, and social behavior) or research employing survey, interview, oral
history, focus group, program evaluation, human factors evaluation, or quality assurance
methodologies.*

Your application will expire on November 17, 2016. If your research will
continue beyond this date, complete the relevant portions of the IRB
Renewal Application. If you wish to modify the application, complete the
Modification of an Approved Protocol Form. Changes in this study cannot
be initiated without IRB approval, except when necessary to eliminate
apparent immediate hazards to participants. When the study closes,
complete the appropriate portions of the IRB Study Closure Form.

Please use reproductions of the IRB approved stamped informed consent
form to obtain consent from your participants.

Should you need to submit any further correspondence regarding this
proposal, please include the above application number.

Good luck with your research.

Sincerely,



358 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-0127
(205) 348-8461
FAX (205) 348-7189
TOLL FREE (877) 820-3066

Carpantato T. Myles, MSM, CIM, CIP
Director & Research Compliance Officer
Office for Research Compliance

Office for Research
Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
R E S E A R C H

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How much time will I spend being this study?

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EXPIRATION DATE: 11-17-16

It will take 15-20 minutes for you to complete a web survey.

Will being in this study cost me anything?

The only cost to you from this study is your time.

Will I be compensated for being in this study?

In appreciation of your time, you will be given 0.5 dollars to your Amazon account. If you do not finish the study, you will not receive the 0.5 dollars for finishing the study.

What are the risks (dangers or harms) to me if I am in this study?

No risk is foreseen as non-sensitive survey is conducted.

What are the benefits (good things) that may happen if I am in this study?

Although you may not benefit personally from being in the study, your participation in the survey may contribute to a better understanding of the general public's attitude toward different sustainable messages organizations send out and be beneficial to academic developments in communication discipline.

What are the benefits to science or society?

This study may help organization public relations executives to know more about the effectiveness of organization sustainable message among general public and to be more helpful to them.

How will my privacy be protected?

Only the investigator can have access to the data. Your individual responses will not be identified or offered in singular fashion. You do not have to answer any questions you do not want to. The data will be kept for 12 months then will be deleted.

How will my confidentiality be protected?

Any work performed on Amazon Turk can be linked to the user's Amazon.com public profile page. However, Amazon Turk worker IDs (i.e., the 14 character sequence of letters and numbers used to identify workers) will not be shared with anyone outside of the research team. Amazon Turk worker IDs will only be collected for the purposes of distributing compensation and will not be associated with survey responses.

What are the alternatives to being in this study? Do I have other choices?

The alternative to being in this study is not to participate. You may choose the designated alternative Human Intelligence Tasks.

What are my rights as a participant in this study?

Taking part in this study is voluntary. It is your free choice. You can refuse to be in it at all. If you start the study, you can stop at any time.

The University of Alabama Institutional Review Board ("the IRB") is the committee that protects the rights of people in research studies. The IRB may review study records from time to time to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

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 CONSENT FORM APPROVED: 11-18-15
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Who do I call if I have questions or problems?

If you have questions, concerns, or complaints about the study right now, please email Ms. Jeyoung Oh at joh11@crimson.ua.edu. If you have questions, concerns, or complaints about the study later on, please call her at 334-296-7765 or email her. If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or email the Research Compliance office at participantoutreach@bama.ua.edu.

After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

Proceeding to the attached questionnaire/survey constitutes your consent to participate and certifies that you are 18 years of age or older. Please keep a copy of this informed consent form for your records.

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 11/18/15
EXPIRATION DATE: 11/18/16