

3-31-2022

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Wilson, V., & Djamassbi, S. (2022). Interpersonal Model of Online Textual Persuasion. *AIS Transactions on Human-Computer Interaction*, 14(1), 30-59. <https://doi.org/10.17705/1thci.00160>

DOI: 10.17705/1thci.00160

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Available at <http://aisel.aisnet.org/thci/vol14/iss1/2>



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Abstract:

As with other forms of human communication, text-based computer-mediated communication (CMC) media, such as email, instant messaging, and online texting, are often used as a means to persuade others. However, unlike most other media, which feature structural bias in their support for either interpersonal or broadcast communication modes, text-based CMC supports both modes. As a result, CMC text messages frequently have ambiguous origins. We argue that individuals respond to this ambiguity by categorizing these messages based on characteristics that distinguish interpersonal messages from broadcast messages, and receivers tend to comply to a greater extent with those messages that they perceive as interpersonal. Based on these arguments, we present a fundamentally new online textual persuasion model. In empirically testing the model in an online experiment that we assessed with structural equation modeling, we found that it exhibited strong explanatory power and additional utility in augmenting existing online persuasion models. The results offer important theoretical contributions to human-computer interaction research generally and provide practical specific insights for improving persuasive communication via text-based CMC.

Keywords: Computer-mediated Communication, Email, Instant Messaging, Social Influence, Interpersonal Communication, Broadcast Communication

Lorne Olfman was the accepting senior editor for this paper.

1 Introduction

Perloff (2003, p. 8) defines persuasion as “a symbolic process in which communicators try to convince other people to change their attitudes or behavior regarding an issue through the transmission of a message, in an atmosphere of free choice”. We use the phrase online textual persuasion (OTP) in this study to describe the process by which one persuades others via text-based computer-mediated communication (CMC), which includes email, instant messaging, online texting, and social media’s textual aspects. A prominent organizational communication medium, text-based CMC (which we refer to as CMC henceforth) has certain objective characteristics that serve to distinguish OTP from persuasion in other settings.

First, CMC transmits few cues that message receivers can use to evaluate a sender’s true nature (Flanagin, 2017). One can easily spoof the cues that CMC does provide, such as the sender’s return address, which makes them unreliable (Wilson et al., 2017a). In particular, text-based CMC features few reliable cues because the medium also supports programmatic message generation and transmission, which simplifies the process to broadcast messages that mimic interpersonal messages.

Second, because text-based CMC supports both interpersonal and broadcast (mass media) communication modes (Reardon & Rogers, 1988), receivers cannot infer a message’s origins based on the medium’s characteristics as they can do with other communication modes. In this way, CMC differs from most communication media, which feature structural bias in their support for either interpersonal or broadcast communication modes but not both. For example, face-to-face and telephone media primarily support interpersonal communication (i.e., interactive communication between two or more interdependent people) (Devito, 2010). In contrast, television, radio, and print media primarily support broadcast communication (i.e., non-interactive, one-way communication that typically addresses a mass audience). However, CMC can deliver a commercial advertising message just as easily as a personal note from one’s former high school classmate.

Although beneficial in many ways, the strong support CMC provides for both interpersonal and broadcast communication can serve to mask a message’s true origins. As a result, actors can use CMC to send unwanted messages (commonly known as spam), which may appear interpersonal but, in fact, have been broadcast indiscriminately across the Internet. The inherent ambiguity in CMC regarding the message source constitutes a primary reason for why spam has proven particularly troublesome in CMC compared to other media (Wilson et al., 2017a).

In many circumstances, receivers cannot easily know whether a real person has sent or a computer program has broadcast CMC messages. Further, receivers often have little motivation to seek additional cues. As Donath (2007, p. 239) has said: “When spam is prevalent, sorting through one’s mail becomes increasingly time consuming; people become less enthusiastic about receiving messages and may become disillusioned with the entire experience”.

In this paper, we introduce a fundamentally new theoretical OTP model based on the extent to which CMC message receivers perceive textual messages as interpersonal. We developed this new model to provide an alternative research perspective toward persuasion processes and outcomes in CMC. This perspective will be particularly useful to HCI researchers, who have a special interest in studying how the interaction between technology and users impacts use outcomes. For example, Li et al. (2017) investigated the influence that communication channel and persuasive strategy have on persuasive effectiveness, while Wilson and Djasasbi (2015) examined how persuasive technologies fit in the human-technology innovation framework.

In addition to potential theoretical advancement, we consider this topic to have important practical implications. Today, CMC use has become ubiquitous throughout organizations. On average, office workers receive 121 emails and send 40 each day (Nick, 2021), and this figure does not include additional messages that they send and receive via text chat, instant messaging, or textual social media applications. Many such CMC messages incorporate persuasion aspects by making a request, promoting a plan of action, arguing for some position, or attempting to sell a product or service.

Further, we need to recognize that OTP is not exclusively associated with nefarious purposes, such as spam. Many people and organizations use OTP for various strategic and socially beneficial objectives, such as promoting healthcare services (Burns et al., 2018; Langrial & Al Araimi, 2017; Win et al., 2017) and green technologies (Shevchuk & Oinas-Kukkonen, 2016). In addition to research benefits, we propose that understanding how receivers perceive and act on persuasive CMC messages can also provide practical guidance to organizational communication strategy.

2 Background

In this section, we outline major factors and models that underpin research in OTP. We then conceptually define interpersonality, present our research model and two alternative OTP models, develop research hypotheses, and outline a framework for assessing the theoretical “goodness” of the OTP interpersonality model (which we simply refer to as the interpersonality model henceforth).

2.1 Underpinnings of OTP Research

Guadagno and Cialdini (2002) introduced the phrase online persuasion in their study in which they assessed how persuasion conducted via CMC compares with other communication modes. They observed that “CMC has been highly socially constrained, restricted for the most part to text-based, impersonal forms” (p. 39). In our study, we continue and extend this focus on the textual CMC forms in recognition that they differ characteristically from other modes that one can support with computers, such as video streaming and audio conferencing (McGrath & Hollingshead, 1994).

Before the World Wide Web, persuasion researchers developed extensive literature streams in distinct communication domains (Rogers, 1999; Walther, 2017). Broadcast-domain researchers focused on “all means of transmitting messages, such as the press, radio, television, and so on, that enable one or a few individuals to reach an audience of many” (Reardon & Rogers, 1988, p. 285). In contrast, interpersonal-domain researchers focused on verbal and textual communication among individuals in dyads or small groups. Although research perspectives differ between these communication subdisciplines, they do share several factors and theoretical models in common that one can apply to predict and explain OTP outcomes.

Researchers have identified three major categories of communication factors that affect message persuasiveness (Perloff, 2003): the message, the message sender (source), and the message receiver.

2.1.1 Message Factors

Messages comprise three overarching characteristics that play an important role in persuasion: 1) message content, 2) message structure, and 3) language (Perloff, 2003). Message content includes information and evidence that a message provides and the framing it adopts (e.g., whether its creator framed it for motivational impact or as an appeal to the receiver’s fears). Message structure concerns a message’s structural elements, such as whether it makes a one- or two-sided argument, whether it draws noteworthy conclusions, where key arguments reside in it (e.g., primacy vs. recency; Haugtvedt & Wegener, 1994), and the form the content takes (e.g., textual, tabular, and/or graphical) (Vessey & Galletta, 1991; Wilson & Zigurs, 1999). Language characteristics include speech speed, whether the message uses powerless vs. powerful phrasing, language intensity (e.g., emotionally charged slogans), and the extent to which language conforms to peer norms.

As in other textual communication media, CMC supports most message content and structure factors and constrains certain key language factors, such as speech speed and volume. This observation suggests that findings regarding effects of message content and message structure in textual communication will likely generalize from the general persuasion literature to the OTP context. At the same time, CMC offers certain features that can augment communication beyond what other media can provide, such as spell-checking software to assist in producing language use that conforms to professional standards (Wilson & Zigurs, 2001), text formatting (Wilson, 2005), and emoticons (Walther & D’Addario, 2001). The fact that CMC offers distinctive capabilities implies that one cannot entirely rely on findings from the general persuasion literature as guidance when conducting OTP studies.

2.1.2 Sender Factors

Kelman (1958) identifies three fundamental persuasive communication characteristics related to message senders that encourage message receivers to comply with them: 1) authority, 2) credibility, and 3) social attractiveness. Authority refers to the respect that receivers have for the sender’s office or position, such as police, military, or government officials and to professionals such as medical doctors, lawyers, or professors. Credibility refers to the attitude receivers develop toward the sender’s expertise, trustworthiness, goodwill (i.e., the extent to which the receiver perceives the sender to care) (Perloff, 2003), and behavioral consistency (Ziegler et al., 2002). Social attractiveness refers to the attitude receivers develop regarding the sender’s likeability, perceived similarity to the receiver, and physical attractiveness.

Contrasted with many interpersonal communication media, CMC constrains most cues regarding the message sender's authority, credibility, or social attractiveness—especially where no prior relationship exists between message sender and receiver. CMC lacks or substantially limits auditory, visual, nonverbal, and paraverbal cues (Burgoon et al., 1994; McGrath & Hollingshead, 1993). Furthermore, one can easily spoof the cues that CMC does include, such as the sender's name or online address, which makes these unreliable (Wilson et al., 2017a). Further, CMC message receivers frequently make social attributions to the computing device, software, or network and treat them as communication sources rather than as simple media. As Sundar and Nass (2002, p. 685) have said: "For example, individuals apply politeness norms to computers: Users asked by a self-praising computer about its own performance provide more positive responses than do those asked by a different computer or a paper-and-pencil questionnaire". This propensity toward social attribution renders CMC receivers particularly susceptible to deception by computer-generated messages, which do not exist to the same degree in other textual communication media.

2.1.3 Receiver Factors

Research has linked numerous receiver demographic and personality traits to message persuasiveness. Demographic traits include gender (Guadagno & Cialdini, 2002), age (Krosnick & Alwin, 1989), and national origin (Lee & Choi, 2005). Personality traits include the need for cognition (Haugtvedt & Petty, 1992), communication goals (Wilson & Lu, 2008), propensity to trust (Lucassen & Schraagen, 2012), dogmatism (Perloff, 2003), and the Big Five personality dimensions (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness/intellect) (Goldberg, 1990; Hirsh et al., 2012). Because people have fixed demographic factors and generally stable personality factors (Cobb-Clark & Schurer, 2012; Roberts & DelVecchio, 2000), we consider it unlikely in most cases that receiver characteristics will impact persuasion via CMC differently than research has reported with other textual communication media.

2.1.4 Theoretical Models of Persuasiveness in CMC

Researchers have applied many different theories to understand the general persuasion process, such as classical conditioning, inoculation, social judgment, elaboration likelihood, and cognitive dissonance (Perloff, 2003). They have also applied additional theoretical models to explain differences between CMC and other media, such as social presence (Short et al., 1976), media richness (Daft & Lengel, 1986), and media synchronicity (Dennis et al., 2008). We acknowledge the potential importance that these and other theoretical models have in studying OTP. However, we focus here on theory streams that directly address how *receivers* evaluate CMC messages. Two prominent streams focus on the role that trust and communication goals play in OTP.

2.1.5 Trust Models

One research stream focuses on the role that trust plays in persuading online consumers to buy products and services. In online contexts:

Trust can be conceptualized as the online consumers' beliefs that the other party will be honest (trusting beliefs), to act in the consumer's interest, to be honest in transactions, and to be capable of delivering the offered goods as promised. (Cases et al., 2010, p. 994)

Researchers have shown trust to mediate or moderate other perceptual factors that can obstruct purchase behaviors, such as how people perceive risk and presentation flaws (Everard & Galletta, 2006; Wang & Emurian, 2005), and to increase purchase intentions (McKnight et al., 2002; Pavlou & Gefen, 2004). Researchers have augmented trust models frequently with other factors that assist in evaluating messages, such as ease of use, usability, and social presence (Choi et al., 2011; Gefen et al., 2003; Weisberg et al., 2011)

2.1.6 Communication Goal Models

Goals constitute cognitive representations of desired results (Austin & Vancouver, 1996). The goals-plans-action model (GPA) (Dillard, 1990) underlies a research stream that has theorized that communication goals affect how message senders produce CMC messages (Wilson & Ziguers, 1998; Wilson, 2005) and whether message receivers intend to comply with CMC message requests (Wilson & Lu, 2008; Wilson, 2015). The GPA model proposes that individuals develop communication goals in a two-tiered structure. Primary goals drive how one plans to and actually does communicate (Schrader & Dillard, 1998), while secondary goals

relating to identity, interaction, relational resources, and arousal management serve to shape and constrain communication (Dillard et al., 1989). Although Dillard (1990) developed and initially validated the GPA model in the message production context, Wilson and Lu (2008) hypothesized that message receivers apply a similar two-tier goals structure in evaluating CMC messages. They found receivers' communication goals predict their intention to comply with message requests and how they perceive message involvement, information quality, and sender credibility.

2.1.7 Warranting Theory

CMC message receivers form impressions about senders' reliability based on warranting, a process in which one ascertains whether how people present themselves online aligns with that their characteristics in the physical world (Walther & Parks, 2002). The warranting principle posits that message receivers assign greater value to information that the sender cannot easily manipulate, which increases such information's persuasiveness. One can obtain warranting information through online sources such as discussion archives, websites, online documents, and social media (Ramirez et al., 2002; Walther et al., 2009). For example:

A personal Web page (apparently constructed by the target his or herself) should provide less warranting value than an institutionally based Web page that appears to be constructed by a webmaster or other third party. A photo provided by an individual of himself online should have less warranting value than an online photo that is attributable to a newspaper photographer. (Walther et al., 2009, p. 232)

However, warranting faces one limitation: given the large number of CMC messages that most people receive, one can question whether receivers will often search beyond the message itself to discover valuable evidence for warranting. Further, warranting theory posits that interpersonal message senders may misrepresent information about themselves where anonymity allows them to do so. However, this premise assumes that receivers will distinguish interpersonal messages from non-interpersonal ones—a problematic assumption since message receivers may have no reliable way to tell whether a CMC message comes from a human or computer program.

2.2 Interpersonality and OTP

The observation that one cannot necessarily assume an interpersonal source in OTP contexts prompted our interest in understanding how receivers evaluate whether CMC messages come from interpersonal source, which we refer to hereafter as interpersonality. We also wanted to know more about the effect that the way in which message receivers evaluate interpersonality may have on OTP outcomes.

We define interpersonality as the receiver's belief that a message comes from an interpersonal source based on how the receiver perceives personal feedback and message coherence in combination. We drew the two concepts personal feedback and message coherence from Reardon (1991, p. 112), who explains how these factors distinguish interpersonal messages from broadcast messages in the persuasive communication context:

Interpersonal persuasion occurs when two or a few people interact in a way that involves verbal and nonverbal behaviors, personal feedback, coherence of behaviors (relevance or fit of remarks and actions), and the purpose (on the part of at least one interactant) of changing the attitudes and/or behaviors of the other(s). This definition separates interpersonal persuasion from mass media persuasion, in which personal feedback and coherence are not present.

Persuasion via interpersonal modes also differ from broadcast modes in the normative level of attitudinal or behavioral changes that each achieves. Researchers have long recognized that interpersonal communication represents an especially potent mechanism for persuasion. As Day (1971, p. 31) explains regarding word of mouth interpersonal communication,

Word of mouth has a much greater impact than media communications on those who are exposed, because (1) there is an opportunity for feedback and clarification, (2) word of mouth is regarded as providing more reliable, trustworthy advice, and (3) personal contacts are generally able to offer social support and encouragement.

As we describe in Section 1, CMC provides a ready mechanism for creating messages that appear interpersonal regardless of their actual origin, and message senders can use this mechanism to increase how effectively their messages persuade receivers (Wilson et al., 2017a). CMC spam exemplifies this

mechanism in action. Although we do not focus on CMC spam per se in this study, we do observe that spam annoys most receivers. In user surveys, virtually all respondents indicate that they dislike receiving CMC spam, and most report that they act to delete messages they perceive as spam (Grimes et al., 2007). We contend that the strong human motivation to avoid annoying unwanted messages constitutes a generalizable phenomenon that pertains to our research since it creates incentives for receivers to quickly categorize CMC messages as interpersonal or not.

In online advertising and commercial messaging contexts, people routinely apply time-saving strategies to categorize unwanted messages in order avoid expending cognitive effort (Ducoffe, 1996; Sujana, 1985). As Ducoffe and Curlo (2002) have observed:

After limited conscious processing, consumers make automatic decisions based on whether advertisements appear to be worth further processing. Categorization research shows that initial evaluations such as these are common and precede further elaboration and deliberate behavior.
(p. 248, emphasis in original)

We propose that people apply categorization strategies in response to all types of CMC messages, which include non-commercial messages and ads. We further propose that interpersonality constitutes the principal basis people use for categorization. These propositions underlie a novel theoretical view that emphasizes interpersonality categorization as the central component in how receivers cognitively evaluate CMC messages.

2.3 Research Model

Previously, Wilson and Djamasbi (2013) created and validated scales to measure personal feedback and message coherence. We extend that research by developing and comprehensively testing the interpersonality model. As we discuss in Section 2.1, various communication characteristics related to message content, sender, and receiver can contribute to how receivers evaluate CMC messages. From these evaluations, differential results emerge across various persuasion outcomes, such as attitude toward the message and intention to comply with message requests (Tanis & Postmes, 2003; Volkema et al., 2011; Wilson, 2005; Wilson & Lu, 2008).

Researchers have not previously studied interpersonality categorization. However, numerous studies have reported that interpersonal word of mouth (WOM) messages persuade people more than than printed messages do (Cheung & Thadani, 2012; Day, 1971; Mangold, 1987; Roy et al., 2017; Sheth, 1971). For example, Herr et al. (1991) report that subjects evaluated products more positively following WOM messages that a human confederate delivered than printed messages in a “consumer reports” format. Electronic word of mouth (eWOM) research focused on social media and online reviews has found similar effects (e.g., Cheung et al., 2008; Hung & Li, 2007; Lee & Youn, 2009; Li & Zhan, 2011)..

In this research, we address the following overarching research question:

R.Q.: Does the interpersonality model (see Figure 1A) provide useful improvements to existing online textual persuasion models?

The interpersonality model identifies interpersonality as the key criterion in the cognitive evaluation process, which implies that this factor predominates alternative factors in determining persuasion outcomes and mediates most antecedent effects relating to CMC message characteristics. Accordingly, we hypothesize:

- H1:** The majority of total effects (direct effects plus indirect effects) of communication characteristics on persuasion outcomes that result from cognitive evaluation of CMC messages is due to interpersonality categorization based on the receiver’s combined perception of personal feedback and message coherence related to the message.
- H2:** Interpersonality mediates the majority of the total effects that communication characteristics have on persuasion outcomes.

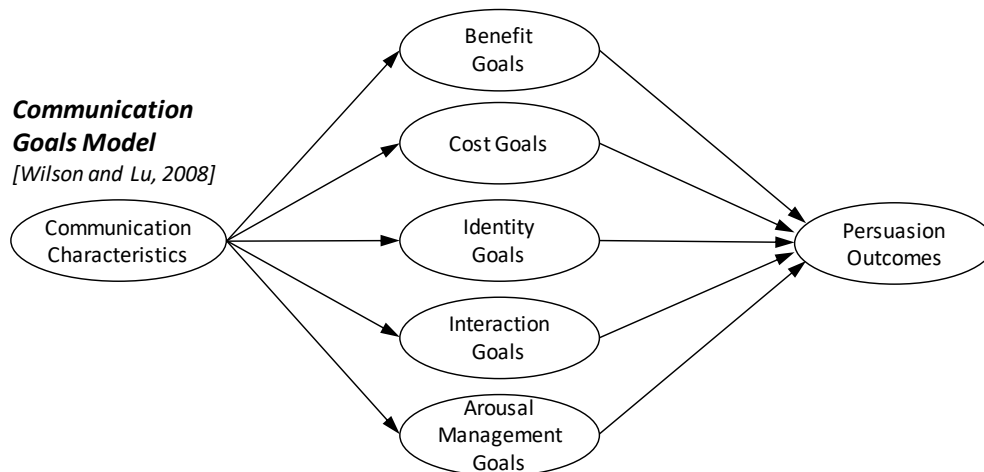
A. Interpersonality Model

Research Model



B. Communication Goals Model

[Wilson and Lu, 2008]



C. Social Presence and Trust Model

[Choi et al., 2011]

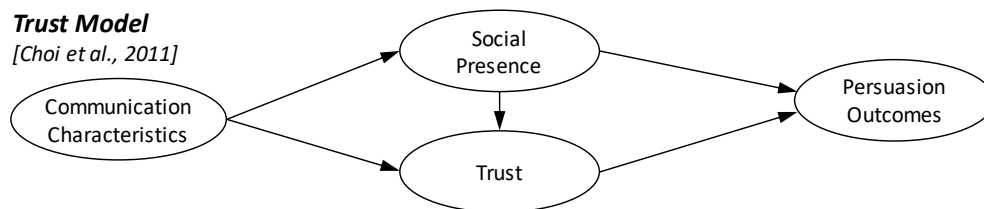


Figure 1. Three OTP Models

2.3.1 Alternative Models Used as Benchmarks

We apply two alternative OTP models as representative benchmarks in evaluating our research model. The communication goals model in Figure 1B (Wilson & Lu, 2008) proposes that people categorize communication characteristics based on their fit with receivers' primary and secondary goal structures and that such a categorization determines persuasion outcomes (Dillard, 1990). The social presence and trust model in Figure 1C (Choi et al., 2011) proposes that categorization centers on trust and social presence perceptions that receivers develop based on communication characteristics. These latter models represent prominent themes in OTP research, and researchers have empirically validated both and found them to explain a substantial amount of variance in persuasion outcomes.

For the interpersonal model to advance how we understand OTP, it should improve on predictions that representative alternative models, such as the communication goals model and the social presence and trust model, provide. Accordingly, we hypothesize:

H3: The interpersonal model predicts persuasion outcomes with higher explanatory power than alternative models.

Finally, we anticipate it will be valuable to future researchers if distinctive predictions of the interpersonal model can augment those predictions offered by alternative models. Accordingly, we hypothesize:

H4: Augmenting alternative models with interpersonal significantly increases overall explanatory power.

2.4 The Interpersonality Model as “Good” Theory

We frame our efforts to examine interpersonal in this study in comprehensive guidelines for developing “good” theory. All theory should clearly present relevant definitions, domain, relationships, and predictions. To develop a “good” theory (i.e., a fully explained set of conceptual relationships that one can use for empirical testing) (Wacker, 2008), one needs to ensure that these properties meet additional criteria that we outline in Figure 2. In this section, we describe how we developed the interpersonal model to satisfy such criteria.

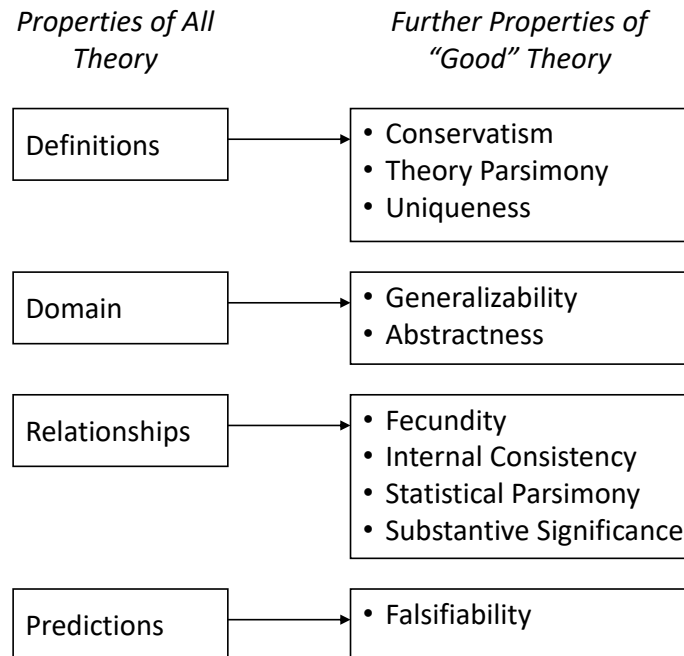


Figure 2. “Good” Theory Properties (Wacker, 2008)

2.4.1 Definitions

As Wacker (2008, p. 9) notes, “you cannot precisely measure what you cannot precisely define”. He proposes that definitions in “good” theory should meet three key criteria to achieve precision: 1) conservatism, 2) parsimony, and 3) uniqueness. Conservatism requires definitions to carefully distinguish the new concept from similar existing terms and avoid misappropriating or simply renaming existing concepts. Parsimony requires concise and non-expansive definitions that avoid non-essential or redundant explanations. Uniqueness requires that definitions do not overlap with other concepts in order to avoid the potential for tautological relationships to emerge.

The personal feedback and message coherence factors that comprise interpersonal were developed using measurement items that carefully represent the conceptual definitions provided by Reardon (1991). Personal feedback and message coherence measures were developed and validated in a prior study (Wilson & Djasbi, 2013). No existing measures were found that overlap the definitions of these factors in the OTP context, and each is defined in a conservative manner as recommended by Wacker (2008):

Feedback is the perception that there is opportunity for the message receiver to respond to the message and receive a reply from the sender. Coherence is the perception that the sender’s message is relevant to the receiver’s situation. (Wilson & Djasbi, 2013, p. 161)

We define interpersonal in the present study as the receiver’s belief that a message comes from an interpersonal source, which the receiver develops based on how they perceive personal feedback and message coherence in the message.

2.4.2 Domain

Domain identifies boundaries in which a theory applies. One needs to consider two key criteria related to domain to achieve a “good” theory: 1) generalizability and 2) abstraction. Generalizability refers to a theory’s applicability across diverse existing populations, and abstraction refers to its applicability across time. While “good” theory does not necessarily require high generalizability and abstraction, it does require one to clearly delineate these properties.

We intentionally limited the interpersonality model’s domain to OTP, which we view as the persuasion process and outcomes that occur through text-based CMC. We further constrain the domain to situations in which CMC messages come from an ambiguous source (i.e., receivers are uncertain whether they come from an interpersonal source or not). We consider that major characteristics of the persuasion process will not likely change in the near term since these have remained relatively consistent across recorded human history (Dillard & Pfau, 2002).

2.4.3 Relationships

The relationships among the concepts in “good” theory must adhere to four restrictive properties: 1) fecundity, 2) internal consistency, 3) statistical parsimony, and 4) substantive significance. Fecundity refers to the degree to which the theory creates new opportunities for understanding and new research while explaining observed results and, in many cases, integrating existing theories. Internal consistency requires that relationships demonstrate logical consistency in the theory’s overall context. Statistical parsimony means that relationships should not require elaborate statistical convolutions. Substantive significance means that the theory should focus on substantive relationships rather than marginally significant ones regardless of their statistical significance.

Prior research has shown that personal feedback and message coherence jointly mediate the entire relationship between an important communication characteristic—purported sender identity—and the extent to which a receiver perceives social presence in the message (Wilson & Djamasbi, 2013). These findings demonstrate fecundity of the personal feedback and message coherence factors by providing new explanations by, for example, suggesting that “much of the ‘salience’ and ‘warmth’ of social presence is actually grounded in definitional distinctions between interpersonal and broadcast communication” (Wilson & Djamasbi, 2013, p. 169). In this study, we assess relationship properties that pertain specifically to the interpersonality model and persuasion outcomes.

2.4.4 Predictions

“Good” theories must generate meaningfully falsifiable predictions. As such, one must be able to carefully and accurately test the predictions via empirical methods. This requires, first, that the prediction is capable of being carefully and accurately tested through empirical methods and, second, that the prediction itself is nontrivial. Regarding this latter point, Popper explains (1963, p. 36, emphasis in original):

Confirmations should count only if they are the result of risky predictions; that is to say, if, unenlightened by the theory in question, we should have expected an event which was incompatible with the theory—an event which would have refuted the theory.

Our hypotheses encompass the predictions that we generated from the interpersonality model. They met the falsifiable criterion since we could carefully and accurately test the predictions via empirical methods. For instance, we would have proven our hypotheses incorrect if we found that impersonality does not constitute the major factor that determines persuasion outcomes, does not mediate the majority of the effects that communication characteristics have on persuasive outcomes, does not provide superior predictions to alternative models, and/or fails to significantly augment predictions from alternative models. Because researchers have not previously studied interpersonality as a factor comprising how people jointly perceive personal feedback and message coherence, we argue that our hypotheses are nontrivial and they represent what Popper (1963) considers risky predictions.

3 Research Method

Wilson et al. (2017a) previously analyzed some data that we used for this study to examine spam email. Specifically, they focused on effects related to benefit goals, trust, and social presence rather than the interpersonality factors we study herein. We collected the remaining data from an online survey that asked

subjects to view a CMC message that had just been delivered to them as part of the survey instructions. After subjects viewed the message, we then asked them to complete a brief questionnaire about how they perceived the message and their reactions to it. Subjects comprised 495 students who attended undergraduate business courses at a large university in the Midwest U.S. By voluntarily completing the study or a comparable alternative assignment, they earned extra course credit.

We notified the subjects who had registered to participate in the study to begin via an email message that contained participation instructions and a hyperlink to access the online survey study. We made the survey available for completion for a one-week period after we initially notified subjects. We sent a follow-up reminder via email to subjects who had not completed the survey after five days. When subjects entered the online study, we informed them about their rights and responsibilities in the research. After subjects agreed to participate, we randomly assigned them through a random number generation algorithm to one of the two communication characteristic conditions that we designed to manipulate messages' interpersonalities. We gathered data over a one-week period, and the subjects took approximately 14 minutes on average to complete the survey.

3.1 Message Manipulation

Researchers have identified numerous communication characteristics as contributing to compliance in online settings; however, not all of these characteristics produce both reliable and robust effects (Guadagno, 2013; Wilson, 2005; Wilson & Lu, 2008). In this study, we chose to adopt Wilson and Djasmasbi's (2013) research design. Specifically, these authors manipulated the purported message sender's identity to represent an acquainted sender versus an unacquainted sender (which we refer to henceforth as sender acquaintance). While we recognize that simple acquaintance does not necessarily encompass all distinctions between the two conditions we operationalized, we propose that this label does clearly capture one important distinction. The acquainted sender version asked subjects to imagine that their favorite professor at the university sent the message. The unacquainted sender version presented the sender as coming from someone with the fictitious email address `bdayo@texts2africa.com`. We made no other modification to message content or format between the message versions (see Figure 3). In their study, Wilson and Djasmasbi (2013) report that this manipulation had a strong effect on how subjects perceived personal feedback and message coherence.

Cialdini (2001) argues that six general principles support the decision to comply with a message request—a commonly measured persuasion outcome (Guadagno, 2013). We focus on the four principles that a message receiver's acquaintance with the sender likely activate:

- Reciprocity: an existing relationship enhances the sense of obligation when a person receives things from others.
- Social proof: decisions regarding behavior depend to a significant degree on how a person's acquaintances behave and their opinions.
- Liking: people prefer to say yes to requests from people whom they feel affection toward.
- Authority: people tend to comply with requests from those in authoritative roles (e.g., police officers, doctors, professors).

We propose the message receivers' acquaintance with a "favorite professor" will heighten the extent to which they perceive reciprocity, social proof, liking, and authority. In turn, we propose that such heightened perceptions will increase the receiver's intention to comply with requests made in the message (which we refer to henceforth as compliance intention).

Considering the interpersonalities model, we anticipate that messages' communication characteristics will influence how subjects categorize interpersonalities. We further anticipate that receivers will have a greater intention to comply with requests in messages that they categorize as interpersonal in origin than for with messages they categorize as broadcast in origin.

3.2 Measures

We drew all measurement items from previously validated instruments and considered all first-order factors reflective. In the interpersonalities model, we modeled interpersonalities as a second-order factor that aggregated the effects of personal feedback and message coherence, and we measured it using scales that Wilson and Djasmasbi (2013) developed. In the communication goals model, we adopted benefit goals,

cost goals, identity goals, interaction goals, and arousal management goals from Wilson and Lu (2008). In the social presence and trust model, we measured trust using the scale that Gefen et al. (2003) developed and measured social presence using the scale that Short et al. (1976) developed. We measured persuasion outcomes in all models using the compliance intention scale from Wilson and Djamasbi (2013). We measured all scale items on seven-point semantic differential scales (see Appendix A for full details).

We individually randomized the order we administered the rating items for each subject as Wilson and Lankton (2012) and Wilson et al. (2017b, 2021) recommend. We collected subjects' age and gender demographic data after we administered the other measurement items.

Acquainted Sender Condition

Received: 03/24/2017 11:23:19 AM
From: Your favorite university professor
Subject: Need your help

African students need your used textbooks.

Students in African countries like Zambia and Nigeria have little money to pay for college textbooks, and they need your help. When you finish your coursework this semester you can make a big difference in their lives by donating your used textbooks to deserving African students instead of reselling them to book buyers. Textbooks are needed in all subject areas.

Here's how to donate.

First, reply to this message to pledge a donation of one, two, or all your used textbooks. When you are finished using your textbooks for the semester, carefully package them and ship them to:

Texts2Africa
P.O. Box 43502
Brooklyn, NY 10024

Our volunteers will be waiting to accept your donation in fulfillment of your pledge.

I look forward to receiving your reply and really appreciate your help in this good cause.

Unacquainted Sender Condition

Received: 03/24/2017 11:23:19 AM
From: bdayo@texts2africa.com
Subject: Need your help

[Remainder of message duplicates Acquainted Sender Condition]

Figure 3. Acquainted Sender and Unacquainted Sender CMC Messages

4 Results

We began the analysis by conducting data inspection and manipulation checks and subsequently proceeded to run measurement and structural models to evaluate our four research hypotheses.

4.1 Data Inspection

We inspected summated values by summing the raw data items for each scale and dividing the result by the number of items in the scale. We used these summated values to calculate the statistics that we present in Table 1 using SPSS version 26. We did not use them in subsequent PLS analyses.

We first tested for multivariate outliers by calculating Mahalanobis distances across all summated variables that we used in the study (see Table 1). We did not find any extreme multivariate outlier cases, so we retained all subject data from the original dataset.

We then assessed data distribution characteristics via skewness and kurtosis statistics, which produced the results that we report in Table 1. Most summated factors in the study exhibited significant skewness and/or kurtosis, which suggested that it would be appropriate to select an analytical method that could handle nonnormal data or to transform the data prior to analysis.

We avoided missing values in the data by having the survey administration software prompt subjects to enter a response before proceeding to subsequent items.

Table 1. Data Inspection and Descriptive Statistics

Statistic	Combined treatments mean (S.D.)	Ratio of skewness / std. error	Ratio of kurtosis / std. error	Research conditions		
				Acquainted sender mean (S.D.)	Unacquainted sender mean (S.D.)	Between conditions sig.***
Number of subjects	495	—	—	247	248	—
Gender	56% male	—	—	59% male	53% male	p = 0.160
Age	20.2 (3.35)	26.54*	88.15*	20.34 (3.84)	20.08 (2.75)	p = 0.443
Personal feedback**	5.71 (1.06)	-4.14*	-1.19	4.82 (1.26)	3.89 (1.39)	p < 0.0001
Message coherence**	5.44 (1.21)	-1.49	2.18*	4.38 (1.34)	3.65 (1.52)	p < 0.0001
Benefit goals**	4.60 (1.68)	-4.95*	-2.20*	5.37 (1.27)	3.83 (1.70)	p < 0.0001
Cost goals**	4.22 (1.66)	-1.57	-3.58*	3.81 (1.56)	4.63 (1.67)	p < 0.0001
Identity goals**	4.76 (1.44)	-4.95*	0.16	4.92 (1.37)	4.60 (1.48)	p = 0.011
Interaction goals**	4.16 (1.55)	-1.91	-2.90*	4.60 (1.57)	3.73 (1.42)	p < 0.0001
Arousal management goals**	3.45 (1.65)	1.35	-4.06*	3.47 (1.66)	3.42 (1.66)	p = 0.736
Social presence**	4.48 (1.19)	-3.27*	1.26	4.71 (1.05)	4.26 (1.28)	p < 0.0001
Trust**	4.23 (1.29)	-1.35	-1.11	4.81 (0.96)	3.71 (0.99)	p < 0.0001
Compliance intention**	3.91 (1.77)	-0.92	-5.02*	4.49 (1.66)	3.32 (1.68)	p < 0.0001

* Significant at p < 0.05 level
 ** Summated variable
 *** Gender assessed with Mann-Whitney U test; age and summated variables assessed with one-way ANOVA

4.2 Manipulation Checks

We calculated descriptive statistics for the overall subject population and for subjects that we assigned to each message version (acquainted sender vs. unacquainted sender). As Table 1 shows, we found no significant differences between treatment groups in gender proportion or age. We found significantly lower values for personal feedback, message coherence, and compliance intention scales in the unacquainted sender treatment than in the acquainted sender treatment, which indicates that we successfully manipulated the sender acquaintance communication characteristic.

In addition, we measured how our subjects assessed each message treatment's interpersonal based on how they responded (1 = strongly disagree / 7 = strongly agree) to the survey item "The "need your help" email message is mostly interpersonal in nature". We found a significantly lower mean response to this item in the unacquainted sender treatment than in the acquainted sender treatment (mean response of 1.50 vs. 3.50, p < 0.0001). Based on this finding, we propose our subjects recognized interpersonal as a major distinction between the two conditions.

4.3 Model Operationalization and Analysis

We operationalized the interpersonality model in the following manner: we used sender acquaintance to represent communication characteristics and operationalized it as a binary factor (0 = unacquainted sender, 1 = acquainted sender). We operationalized interpersonality as an aggregate second-order factor (Wright et al., 2012) based on the theoretical definition for interpersonality as how the receiver perceives first-order personal feedback and message coherence factors in combination. We operationalized compliance intention as a reflective factor.

We selected WarpPLS version 5.0 for the analysis using the PLS regression outer model algorithm, Warp3 inner model algorithm, and Stable 3 resampling settings. PLS analysis does not require normally distributed variables (Chin, 1998), which allows one to use it where significant skewness and kurtosis occur as with our data (see Table 2). In addition, WarpPLS can detect and model non-linear relationships in the form of “U” and “S” curves, which cognitive and behavioral research often encounters (Kock, 2015).

To assess the measurement models, we followed guidelines for using PLS analysis with multidimensional factors (Chin, 2010; Roberts & Thatcher, 2009; Wright et al., 2012). We created two measurement models, a model with first-order reflective factors (personal feedback, message coherence, and compliance intention) and a model with second-order interpersonality (modeled as a formative factor) and compliance intention. We conducted a confirmatory factor analysis (CFA) for the model with first-order factors that exhibited no large crossloadings between measurement items and unintended measures (see Table 2). Further analysis found that both first-order factors were significantly associated with the second-order interpersonality factor (interpersonality → personal feedback path weight = 0.59, $p < 0.0001$; interpersonality → message coherence path weight = 0.52, $p < 0.0001$).

We calculated correlations among latent factors for both these models (see Table 3). We assessed the convergent validity of each model's measures by calculating average variance extracted (AVE) and composite reliability statistics (see Table 3). For all measures, AVE exceeded 0.5 and composite reliability exceeded 0.7 and, thus, surpassed accepted threshold levels (Fornell & Larcker, 1981; Hair et al., 2009).

We assessed the discriminant validity of each model's measures by confirming that the square root of AVE exceeded any correlation with any other measure (Fornell & Larcker, 1981) and reviewing the factor structure in the CFA conducted for the model of first-order factors. Based on these analyses, we found support for construct validity in the measurement models (Straub et al., 2004).

We present the results from analyzing the interpersonality structural model in Figure 4A. Sender acquaintance significantly predicted receivers' interpersonality beliefs (path weight = 0.35, $R^2 = 0.12$, unacquainted sender coded as 0 and acquainted sender coded as 1), and interpersonality beliefs significantly predicted receivers' compliance intention (path weight = 0.71, $R^2 = 0.54$). Values for average block variance inflation factor (AVIF = 1.14) and average full collinearity variance inflation factor (AFVIF = 1.84) were well below threshold criteria (Kock, 2015). All other model fit and quality indices that WarpPLS reported also fell in acceptable ranges. In addition, sample populations in this study substantially exceed minimum size requirements based on both the 10-times rule and minimum R-squared method that Hair et al. (2014) recommend.

4.4 Review of the Hypotheses

In order to evaluate our hypotheses, we conducted several further analyses. First, we created structural models to test mediating effect that interpersonality had on the relationship between sender acquaintance and compliance intention following guidelines from Baron and Kenny (1986). A direct model containing only the direct relationship between sender acquaintance and compliance intention produced a path weight of 0.33 ($p < 0.0001$). A separate mediated model augmented the interpersonality research model with a direct link between sender acquaintance and compliance intention. We found a path weight of 0.09 ($p = 0.03$) for this direct link, 0.39 ($p < 0.0001$) for the mediating link between sender acquaintance and interpersonality, and 0.71 ($p < 0.0001$) for the mediating link between interpersonality and compliance intention.

Due to a reviewer's request, we created alternate models in which we reversed the positions of interpersonality and compliance intention. A direct model containing only the direct relationship between sender acquaintance and interpersonality produced a path weight of 0.34 ($p < 0.0001$). A separate model augmented this relationship with compliance intention mediating the relationship between sender acquaintance and continuance intention. We found a path weight of -0.11 ($p = 0.007$) for this direct link, 0.33 ($p < 0.0001$) for the mediating link between sender acquaintance and compliance intention, and 0.70 ($p <$

0.0001) for the mediating link between interpersonalness and compliance intention. Second, we created and ran structural models for the communication goals model (see Figure 4B) and the social presence and trust model (see Figure 4C). These models both significantly predicted compliance intention. Third, we created a structural model that we entered antecedent factors from all the models. We refer to this model hereafter as the full model. We show statistics from the measurement model validating this analysis in Table 4. We then separately ran the full model and five nested models to contrast their relative predictions about intention to comply (see Table 5).

Table 2. CFA of First-order Interpersonality Model Scale Measures*

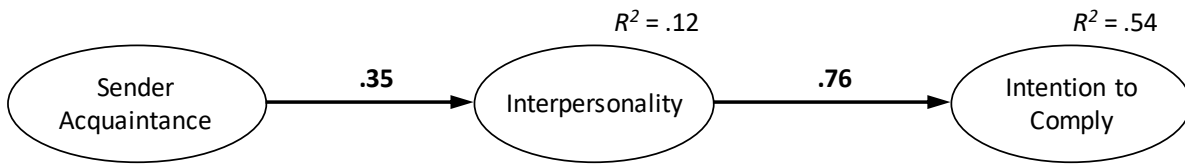
Survey item (response labels)	1	2	3
Feedback1: If I replied to this message, my reply would be read (1 = strongly disagree / 7 = strongly agree)	0.79	0.00	0.00
Feedback2: If I replied to this message, the person who sent it would read my reply (1 = strongly disagree / 7 = strongly agree)	0.80	0.00	0.00
Feedback3: If I replied to this message to ask a question, someone would respond to answer my question (1 = strongly disagree / 7 = strongly agree)	0.77	0.00	0.00
Feedback4: If I replied to this message to ask for a small change in the terms, my request would be met (1 = strongly disagree / 7 = strongly agree)	0.46	0.00	0.00
Coherence1: For me, this message is (1 = a misfit / 7 = a good fit)	0.00	0.89	0.00
Coherence2: For me, this message is (1 = not applicable / 7 = applicable)	0.00	0.73	0.00
Coherence3: This message has personal relevance to me (1 = strongly disagree / 7 = strongly agree)	0.00	0.71	0.00
Coherence4: This message fits with my interests (1 = strongly disagree / 7 = strongly agree)	0.00	0.76	0.00
Comply1: How likely is it you would comply with the request made in the "need your help" email message? (1 = very unlikely / 7 = very likely)	0.00	0.00	0.88
Comply2: If I actually received the "need your help" email message, I would do what it requests (1 = strongly disagree / 7 = strongly agree)	0.00	0.00	0.83
Comply3: I would pledge to donate at least one book if I actually received the "need your help" email message (1 = strongly disagree / 7 = strongly agree)	0.00	0.00	0.84
Comply4: I would not pledge to donate any books if I received the "need your help" email message (1 = strongly disagree / 7 = strongly agree (<i>reverse coded</i>))	0.00	0.00	0.79
* Standardized total effects			

Table 3. Correlations among Latent Factors in the Interpersonality Model

First-order factors					
	AVE	Composite reliability	Personal feedback	Message coherence	Compliance intention
Personal feedback	0.93	0.90	0.87		
Message coherence	0.93	0.90	0.40	0.87	
Compliance intention	0.97	0.93	0.41	0.76	0.93
Second-order interpersonalness factor and compliance intention					
	AVE	Composite reliability	Interpersonalness	Compliance intention	
Interpersonalness	0.92	0.83	0.85		
Compliance intention	0.94	0.93	0.73	0.88	
Note: we show square roots of average variances extracted (AVEs) in bold on the diagonals					

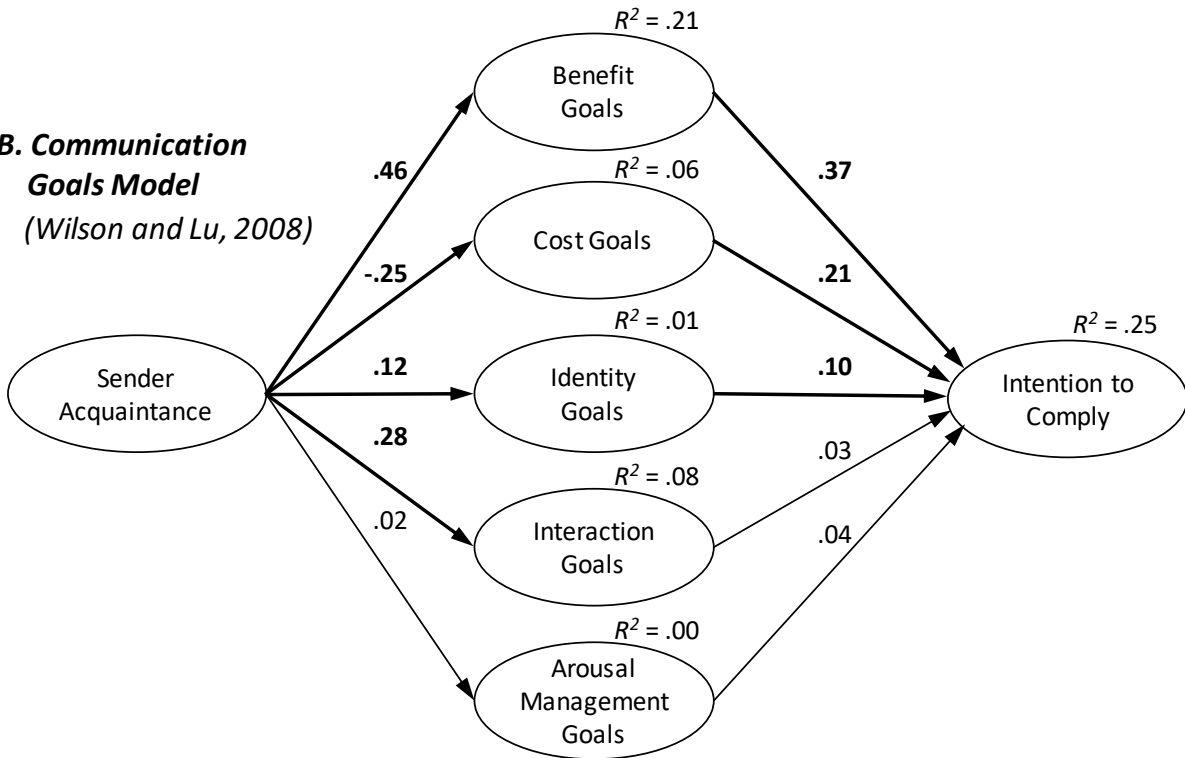
A. Interpersonality Model

Research Model



B. Communication Goals Model

(Wilson and Lu, 2008)



C. Social Presence and Trust Model

(Choi et al., 2011)

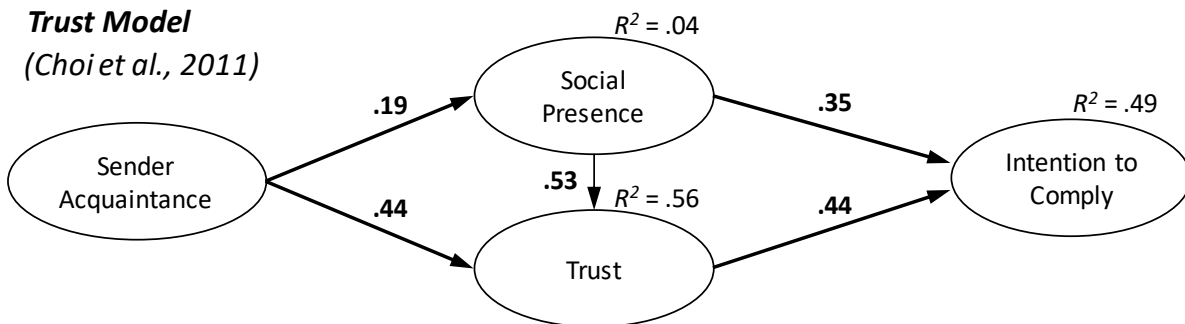


Figure 4. SEM Analysis Results

Table 4. Correlations among Latent Factors in the Full Model*

	AVE	CR	Interpers.	benefit goals	Cost goals	Ident. goals	Int. goals	A. M. goals	Social pres.	Trust	Comp. intent
Interpersonality	0.713	0.833	0.845								
Benefit goals	0.753	0.901	0.400	0.867							
Cost goals	0.683	0.866	-0.208	-0.179	0.827						
Identity goals	0.632	0.837	0.205	0.403	0.240	0.795					
Interaction goals	0.603	0.819	0.191	0.377	0.353	0.514	0.776				
Arousal management goals	0.747	0.898	-0.041	0.070	0.546	0.288	0.550	0.864			
Social presence	0.570	0.841	0.690	0.365	-0.169	0.155	0.141	-0.071	0.755		
Trust	0.715	0.882	0.729	0.474	-0.271	0.172	0.238	-0.058	0.606	0.845	
Compliance intention	0.772	0.931	0.730	0.456	-0.241	0.218	0.145	-0.017	0.606	0.643	0.879

Note: we show square roots of average variances extracted (AVEs) in bold on the diagonal.

Table 5. Predictions of Full and Nested Models on Compliance Intention*

Relationship	1) Nested model: comm. goals	2) Nested model: trust	3) Nested model: interpers.	4) Nested model: trust, interpers.	5) Nested model: comm. goals, interpers.	6) Full model: comm. goals, trust, interpers.
Interpersonality → compliance intention			0.738 (0.544)	0.488 (0.360)	0.645 (0.476)	0.473 (0.339)
Benefit goals → compliance intention	0.367 (0.171)				0.169 (0.079)	0.127 (0.059)
Cost goals → compliance intention	-0.208 (0.052)				-0.084 (0.021)	-0.070 (0.017)
Identity goals → compliance intention	0.103 (0.025)				0.072 (0.017)	0.083 (0.020)
Interaction goals → compliance intention	0.034 (0.005)				0.029 (0.004)	0.042 (0.007)
Arousal management goals → compliance intention	-0.037 (0.001)				0.013 (0.000)	-0.007 (0.000)
Social presence → compliance intention		0.347 (0.212)		0.162 (0.099)		0.148 (0.090)
Trust → compliance intention		0.435 (0.279)		0.192 (0.124)		0.125 (0.081)
Compliance intention R^2 predicted by model	0.254	0.491	0.544	0.583	0.597	0.617
R^2 difference between nested model and the full model**	0.363 $p < 0.0001$ $d^2 = 0.948$	0.126 $p < 0.0001$ $d^2 = 0.329$	0.073 $p < 0.0001$ $d^2 = 0.191$	0.034 $p < 0.0001$ $d^2 = 0.089$	0.020 $p < 0.0001$ $d^2 = 0.052$	—

* Displayed from left-to-right in order of increasing R^2 ; significant path weights in bold; parentheses show factor's contribution to model R^2
** R^2 difference statistics calculated following Subramani (2004)

4.4.1 Hypothesis Support

First, as we show in Table 5, interpersonality produced a significantly larger effect on compliance intention than any other cognitive evaluation factors we tested, which supports H1. Second, the mediating effect tests we conducted following Baron and Kenny (1986) showed that interpersonality had a significant mediating effect on communication characteristics, which sender acquaintance represented in this study. We further found that sender acquaintance accounted for 11 percent of the explained variance in compliance intention compared to less than one percent in the mediated model, which supports H2. Third, as Figure 4 and Table 5 show, the interpersonality model explained a larger proportion of variance in compliance intention ($R^2 = 0.54$) than either the communication goals model ($R^2 = 0.25$, $p < .0001$) or the social presence and trust model ($R^2 = 0.49$, $p < .0001$), which supports H3. Fourth, Table 5 provides comparisons among the models assessed in the present study and effects where we combined elements from multiple models. Adding interpersonality to the communication goals model more than doubled explained variance in compliance intention ($R^2 = 0.254$ vs. 0.597 , $p < 0.0001$). Adding interpersonality to the social presence and trust model increased explained variance by nearly 20 percent ($R^2 = 0.491$ vs. 0.583 , $p < 0.0001$). These findings strongly support H4.

5 Discussion

The interpersonality model proposes that receivers categorize CMC messages' interpersonality before deciding how to respond based on how they jointly perceive personal feedback and message coherence. Our findings support our initial hypotheses and indicate that interpersonality can potentially predict OTP outcomes, which receivers' intention to comply with a CMC message request represented in this study.

We argue our study advances scholarly knowledge in the following ways.

- 1) The interpersonality model advances theory by positing that message interpersonality constitutes the key criterion that receivers consider in evaluating CMC messages and by identifying personal feedback and message coherence as factors that jointly form message interpersonality.
- 2) The empirical results advance our ability to predict and explain OTP outcomes by finding that a) the interpersonality model more potently predicts intention to comply than the validated alternative models we tested and b) message interpersonality can effectively augment existing OTP models.
- 3) Our research design advances research methodology by demonstrating the utility of practical scales for measuring personal feedback and message coherence.

Rather than offering an incremental improvement, the interpersonality model represents a fundamental advance in understanding the OTP process, and it has important implications for research and practice. In the following sections, we address the approach's theoretical adequacy, implications for research and practice, and limitations in the current research.

5.1 Theoretical Adequacy

As we discuss in Section 2.4, prior research has met the definition and domain criteria for "good" theory (Wacker, 2008) about the personal feedback and message coherence first-order factor that underlie interpersonality (Wilson & Djamasbi, 2013). We assessed the interpersonality construct's definition and domain in Section 2.4. Specifically, we focused on assessing the extent to which the interpersonality contained theoretically adequate relationships and made theoretically adequate predictions.

5.1.1 Relationships

Relationships in "good" theory should demonstrate fecundity, internal consistency, statistical parsimony, and substantive significance. Due to the novel perspective it provides on the OTP process, we argue that the interpersonality model demonstrates significant fecundity. We found that interpersonality mediated most effects of the communication characteristic we tested, explained more than half the variance in subjects' compliance intention, and added significant predictive value when we used it to augment the two alternative models we assessed. When balanced against factors comprising these alternative models, the relationship between interpersonality and compliance intention can largely replace the other relationships that we detail in Table 5. The overall findings further suggest that much of the predictiveness of the alternative models we

studied here—including communication goal and trust factors—actually derives from individuals' evaluation of interpersonal, as Wilson and Djamasbi (2013) previously interpreted to be the case for social presence. These findings imply the need to fundamentally reevaluate the existing OTP literature in order to better understand how antecedent factors *other than* interpersonal actually contribute to persuasion outcomes.

Our findings demonstrate that the interpersonal model is internally consistent with the immediate theory that people evaluate CMC messages by categorizing interpersonal based on personal feedback and message coherence as well as related theories of advertising evaluation (e.g., Ducoffe & Curlo, 2000). Both first-order factors contributed strongly to the aggregate, second-order interpersonal construct, and interpersonal was strongly associated both with antecedent and dependent factors as our hypotheses outline.

We integrated recommendations to ensure statistical parsimony into our research design with an emphasis on straightforward analytical techniques. We obtained results using commonly available analysis tools and presented them in standard order.

Finally, we propose the strength of the relationships we found throughout the interpersonal model validate our theory's substantive significance. Based on these observations, we argue that relationships comprising the interpersonal model meet the threshold for "good" theory.

5.1.2 Predictions

"Good" theory must generate meaningfully falsifiable predictions. The interpersonal model met the falsifiable criterion since we could carefully and accurately test its predictions via empirical methods. Specifically, we would have proven our hypotheses incorrect if we found that impersonality does not constitute the major factor that determines persuasion outcomes, does not mediate the majority of the effects that communication characteristics have on persuasion outcomes, does not provide superior predictions to alternative models, and/or fails to significantly augment predictions from alternative models. In contrasting the interpersonal model to established alternative models, we intentionally set these hypotheses to be risky. Yet, we found support for the hypotheses in all cases. Given these results, we argue that predictions of the interpersonal model meet the threshold for "good" theory.

5.2 Implications for Research

We developed the interpersonal model due to three major observations we made based on reviewing the literature and our own prior experiences:

- 1) The strong support CMC provides for both interpersonal and broadcast communication can create much greater ambiguity about where CMC messages actually come from compared to other communication in other media.
- 2) Individuals feel strongly motivated to categorize CMC messages in order to avoid unwanted ones (e.g., spam).
- 3) When individuals categorize CMC messages as interpersonal in origin, they have a higher likelihood to promote a positive response, such as intending to comply with a request.

Acting on these observations, we focused our theory-development efforts on definitional distinctions in persuasion occurring via interpersonal communication versus broadcast communication. With this approach, we identified message coherence and personal feedback as key contributors to how individuals categorize message interpersonal.

For researchers, our findings imply a general need to rethink how CMC message receivers approach decision making. Much prior research has focused on how receivers feel about a message sender, such as how they develop trust (Choi et al., 2011), perceive source credibility (Li, 2013), and perceive social presence (Choi et al., 2011). These factors have face validity in that message receivers report such feelings, and their feelings have proved to predict persuasion outcomes. Yet, our findings show that interpersonal more potently predicts persuasion outcomes due in large part to how individuals evaluate structural communication characteristics.

A second research stream has focused on the message receivers' communication goals in recognition that CMC messages frequently provide few reliable cues as to the actual message origin (Wilson & Lu, 2008;

Wilson, 2015). Our findings suggest that the interpersonality model provides an overall better approach than communication goals for understanding how individuals evaluate CMC messages.

Both alternative models we studied significantly explained compliance intention, which supports their practical utility. However, the interpersonality model shared and superseded their explanatory power.

Indeed, our findings suggest that at least some other effects that researchers have identified in the OTP context may be artifacts or covariates of interpersonality categorization. For example, Leung and Bai (2013) presented a model in which social media involvement predicts website revisit intention. Researchers have found message coherence to be highly associated with message involvement (Zaichkowsky, 1986), which implies that the interpersonality model could provide a viable alternative way to explain results from Leung and Bai (2013) and other studies that have incorporated involvement measures.

We propose that the interpersonality model augments warranting theory, which argues that message receivers assign greater value to information that the sender cannot easily manipulate (Walther et al., 2009). However, warranting theory focuses exclusively on communication that people believe to be interpersonal. As DeAndrea (2014, p. 188) notes:

The causal processes through which (a) warranting cues affect perceptions of warranting value and (b) perceptions of warranting value moderate the effect of information on impressions comprise the core of warranting theory and function to elucidate how people evaluate online self-presentations.

The interpersonality model augments these processes by theorizing that message receivers also evaluate whether messages come from an interpersonal or broadcast source. We anticipate receivers typically evaluate interpersonality prior to assessing warranting information and that warranting will play a reduced role where individuals evaluate messages as having a broadcast source. However, this speculative interpretation requires further study.

Interpersonality also may impact how one applies the elaboration likelihood model (ELM) (Petty & Cacioppo, 1983) and the heuristic-systematic model of online processing (HSM) (Chaiken, 1980) in the context of OTP. Both these models propose dual routes by which individuals process messages based on the extent to which they evaluate a message as important and their personal motivation and ability to perform the processing. In situations with ambiguous message interpersonality, our findings suggest that individuals could evaluate interpersonality more prominently than the factors underlying ELM and HSM and, thus, possibly obstruct or confound ELM and HSM predictions. These implications present interesting directions for future research.

Finally, the findings present several opportunities to explain relationships for which little theory has previously existed. For example, in a CMC messaging study, Wilson et al. (2017a) demonstrated that trust plays a more important role in predicting receivers' compliance intentions when they have no ties with the sender compared to when they have strong ties. However, we do not currently know the mechanism by which individuals develop trust when they lack verifiable cues. Evaluating interpersonality could potentially provide a theoretical explanation for this and other related phenomena.

5.3 Implications for Practice

As we note in Section 1, many people and organizations use OTP for various strategic and socially beneficial objectives, such as to promote healthcare services and green technologies. Our findings indicate that people are finely attuned to distinctions between interpersonal and broadcast forms of communication and that they feel strongly motivated to identify interpersonal communication in the CMC context in order to avoid investing cognitive effort toward unwanted broadcast messages. Practitioners can benefit from our findings by enhancing mechanisms that promote and reinforce the extent to which message receivers perceive personal feedback and message coherence.

Practitioners can enhance personal feedback by clearly and explicitly inviting interactions with message receivers, by providing straightforward means for interactions, and by responding quickly and effectively to any interactions that receivers initiate. One should recognize that receivers decide quickly whether to trust a CMC message's purported source (Wilson et al., 2017a), and our findings indicate that trust has a strong association with interpersonality perceptions (see Table 4). We anticipate that, once established, how a receiver perceives personal feedback will likely transfer to future messages in the same manner as trust. These observations suggest that it can be a good investment to promote the availability of personal feedback when making initial contacts.

Practitioners can enhance message coherence by investing resources to understand people's needs and interests before communicating with them and by continuing to maintain alignment with their needs and interests following initial contact.

Readers may note that this advice largely restates a central principle in relationship marketing (Morgan & Hunt, 1994). However, the interpersonality model identifies an alternative perspective in which trust, which we define as confidence in someone's reliability and integrity, has a subordinate role to the extent to which message receivers perceive that they have an opportunity respond to the message and receive a reply from the sender (personal feedback) and that the sender's message pertains to their situation (message coherence). Advice to focus primarily on these two interpersonality components rather than on developing trust represents a significant departure from guidance that relationship marketing studies currently provide.

5.4 Limitations

Our study has several limitations. First, as we discuss in Section 2.4.2, we limited the interpersonality model's domain to persuasion attempts via CMC messages in situations where receivers find interpersonality potentially ambiguous. We believe this limitation restricts applicability of interpersonality to the text-based message context. Thus, we caution against generalizing our findings beyond this domain.

Second, we based some categorizations on pragmatic considerations. For example, we followed Wilson and Djamasbi (2013) in labeling message senders as acquainted versus unacquainted; however, we acknowledge that simple acquaintance does not necessarily capture all distinctions that our subjects may have inferred between the two conditions. Identifying these distinguishing factors could approve a productive area for future research.

Other important limitations relate to our research design. Specifically, we implemented a single form of message content, manipulated a single communication characteristic (acquaintance with the purported sender), and assessed a single persuasion outcome (compliance intention). We anticipate that these factors represent the larger range of factors that researchers could investigate. However, confirming this anticipation would require researchers to design and administer new research.

In addition, our subject sample (i.e., U.S. university students) does not represent other populations, such as people outside the U.S. or the general adult population in the U.S. We contend that the message conditions that we implemented appropriately motivated and manipulated our subject sample. However, we do not know whether we would have found similar effects for other populations especially since students' errors and biases may not generalize to other populations.

6 Conclusion

Researchers have studied human persuasion for centuries, which has resulted in much work in the interpersonal communication and broadcast communication domains but relatively few studies that span the boundaries between the two. CMC applications represent an unusual case among communication media in that they highly support for both interpersonal and broadcast communication. This attribute creates ambiguity for receivers who cannot reliably ascertain from communication characteristics whether a CMC message comes from an interpersonal or broadcast source. However, prior researchers had not investigated the ramifications this situation presents to the CMC persuasion process. We argue this research gap presents an opportunity for HCI researchers who inherently have an interest in interactions between technology and its human users.

Based on recognizing that CMC messages frequently have ambiguous origins, we developed the interpersonality model, which we present as a theoretical advancement in understanding cognitive evaluations that underlie the persuasion process in online settings and a tool for predicting persuasion outcomes across various textual CMC applications.

References

- Austin, J. T., & Vancouver, J. B. (1996). Goal constructs in psychology: Structure, process, and content. *Psychological Bulletin*, 120(3), 338-375.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Burgoon, J. K., Buller, D. B., & Woodall, W. G. (1994). *Nonverbal communication: The unspoken dialogue*. Greyden Press.
- Burns, C., Sadat Rezai, L., & St Maurice, J. (2018). Understanding the context for health behavior change with cognitive work analysis and persuasive design. In *Proceedings of the 51st Hawaii International Conference on System Sciences*.
- Cases, A. S., Fournier, C., Dubois, P. L., & Tanner, J. J. F. (2010). Web site spill over to email campaigns: The role of privacy, trust and shoppers' attitudes. *Journal of Business Research*, 63(9), 993-999.
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5), 752-766.
- Cheung, C. M., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54(1), 461-470.
- Cheung, C. M., Lee, M. K., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, 18(3), 229-247.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 1295-1336). Lawrence Erlbaum Associates,
- Chin, W. W. (2010). How to write up and report PLS analyses. In V. W. Vinzi, W. W. Chin, & J. Henseleer (Eds.), *Handbook of partial least squares: Concepts, methods, and applications* (pp. 655-690). Springer.
- Choi, J., Lee, H. J., & Kim, Y. C. (2011). The influence of social presence on customer intention to reuse online recommender systems: The roles of personalization and product type. *International Journal of Electronic Commerce*, 16(1), 129-154.
- Cialdini, R. B. (2001). *Influence: Science and practice* (4th ed.). Allyn and Bacon.
- Cobb-Clark, D. A., & Schurer, S. (2012). The stability of big-five personality traits. *Economics Letters*, 115(1), 11-15.
- Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science*, 32(5), 554-571.
- Day, G. S. (1971). Attitude change, media and word of mouth. *Journal of Advertising Research*, 11(6), 31-40.
- DeAndrea, D. C. (2014). Advancing warranting theory. *Communication Theory*, 24, 186-204.
- Dennis, A. R., Fuller, R. M., & Valacich, J. S. (2008). Media, tasks, and communication processes: A theory of media synchronicity. *MIS Quarterly*, 32(3), 575-600.
- Devito, J. A. (2010). *Interpersonal messages: Communication and relationship* (2nd ed.). Allyn and Bacon.
- Dillard, J. P. (1990). A goal-driven model of interpersonal influence. In J. P. Dillard (Ed.), *Seeking compliance: The production of interpersonal influence messages* (41-56). Gorsuch Scarisbrick.
- Dillard, J. P., & Pfau, M. (2002) *The persuasion handbook: Developments in theory and practice*. Sage.
- Dillard, J. P., Segrin, C., & Harden, J. M. (1989). Primary and secondary goals in the production of interpersonal influence messages. *Communication Monographs*, 56, 19-38.
- Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication*, 13, 231-251.
- Ducoffe, R. H. (1996). Advertising value and advertising on the web. *Journal of Advertising Research*, 36(5), 21-35.

- Ducoffe, R. H., & Curlo, E. (2000). Advertising value and advertising processing. *Journal of Marketing Communication, 6*(4), 247-262.
- Everard, A., & Galletta, D. F. (2006). How presentation flaws affect perceived site quality, trust, and intention to purchase from an online store. *Journal of Management Information Systems, 22*(3), 56-95.
- Flanagin, A. J. (2017). Online social influence and the convergence of mass and interpersonal communication. *Human Communication Research, 43*(4), 450-463.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.
- Gefen, D., Straub, D. W., & Karahanna, E. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly, 27*, 51-90.
- Goldberg, L. R. (1990). An alternative "description of personality": The big-five factor structure. *Journal of Personality and Social Psychology, 59*(6), 1216-1229.
- Grimes, G. A., Hough, M. G., & Signorella, M. L. (2007). Email end users and spam: Relationship of gender and age group to attitudes and actions. *Computers in Human Behavior, 23*, 318-332.
- Guadagno, R. E. (2013). Social influence online: The six principles in action. In C. Liberman (Ed.), *Casing persuasive communication* (pp. 319-344). Kendall Hunt.
- Guadagno, R. E., & Cialdini, R. B. (2002). Online persuasion: An examination of gender differences in computer-mediated interpersonal influence. *Group Dynamics: Theory, Research, and Practice, 6*(1), 38-51.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis*. Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sardedt, M. (2014). *A primer on partial least squares structural equation modeling*. Sage.
- Haugtvedt, C. P., & Petty, R. E. (1992). Personality and persuasion: Need for cognition moderates the persistence and resistance of attitude changes. *Journal of Personality and Social psychology, 63*(2), 308-319.
- Haugtvedt, C. P., & Wegener, D. T. (1994). Message order effects in persuasion: An attitude strength perspective. *Journal of Consumer Research, 21*(1), 205-218.
- 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, 17*(4), 454-462.
- Hirsh, J. B., Kang, S. K., & Bodenhausen, G. V. (2012). Personalized persuasion: Tailoring persuasive appeals to recipients' personality traits. *Psychological Science, 23*(6), 578-581.
- Hung, K. H., & Li, S. Y. (2007). The influence of eWOM on virtual consumer communities: Social capital, consumer learning, and behavioral outcomes. *Journal of Advertising Research, 47*(4), 485-495.
- Kelman, H. C. (1958). Compliance, identification, and internalization: Three processes of attitude change. *Journal of Conflict Resolution, 2*(1), 51-60.
- Kock, N. (2015). *WarpPLS 5.0 user manual*. Retrieved from http://cits.tamtu.edu/WarpPLS/UserManual_v_5_0.pdf
- Krosnick, J. A., & Alwin, D. F. (1989). Aging and susceptibility to attitude change. *Journal of Personality and Social Psychology, 57*(3), 416-425.
- Langrial, S. U., & Al Aرامي, F. A. (2017). Promoting pediatric healthcare through persuasive information systems: A qualitative study. In *Proceedings of the Pacific Asia Conference on Information Systems*.
- Lee, M., & Youn, S. (2009). Electronic word of mouth (eWOM): How eWOM platforms influence consumer product judgement. *International Journal of Advertising, 28*(3), 473-499.
- Lee, W. N., & Choi, S. M. (2005). The role of horizontal and vertical individualism and collectivism in online consumers' responses toward persuasive communication on the Web. *Journal of Computer-Mediated Communication, 11*(1), 317-336.

- Leung, X. Y., & Bai, B. (2013). How motivation, opportunity, and ability impact travelers' social media involvement and revisit intention. *Journal of Travel and Tourism Marketing*, 30(1-2), 58-77.
- Li, C. (2013). Persuasive messages on information system acceptance: A theoretical extension of elaboration likelihood model and social influence theory. *Computers in Human Behavior*, 29, 264-275.
- Li, H., Chatterjee, S., & Turetken, O. (2017). Information technology enabled persuasion: An experimental investigation of the role of communication channel, strategy and affect. *AIS Transactions on Human-Computer Interaction*, 9(4), 281-300.
- Li, J., & Zhan, L. (2011). Online persuasion: How the written word drives WOM: Evidence from consumer-generated product reviews. *Journal of Advertising Research*, 51(1), 239-257.
- Lucassen, T., & Schraagen, J. M. (2012). Propensity to trust and the influence of source and medium cues in credibility evaluation. *Journal of Information Science*, 38(6), 566-577.
- Mangold, G. W. (1987) Use of commercial sources of information in the purchase of professional services: what the literature tells us. *Journal of Professional Services Marketing* 3(1-2), 5-17.
- McGrath, J. E., & Hollingshead, A. B. (1993). Putting the "group" back in group support systems: Some theoretical issues about dynamic processes in groups with technological enhancements. In L. M. Jessup & J. S. Valacich (Eds.), *Group support systems: New perspectives* (pp. 78-96). Macmillan.
- McGrath, J. E., & Hollingshead, A. B. (1994). *Groups interacting with technology*. Sage.
- McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13(3), 334-359.
- Morgan, R., & Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38.
- Nick, G. (2021). How many emails are sent per day? *Review42*. Retrieved from <https://review42.com/how-many-emails-are-sent-per-day>
- Pavlou, P. A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information Systems Research*, 15(1), 37-59.
- Perloff, R. M. (2003). *The dynamics of persuasion: communication and attitudes in the twenty-first century*. Lawrence Erlbaum.
- Petty, R. E., & Cacioppo, J. T. (1983). Central and peripheral routes to persuasion: Application to advertising and consumer psychology. In L. Percy & A. Woodside (eds.), *Advertising and consumer psychology* (pp. 3-23). Lexington.
- Popper, K. (1963). *Conjectures and refutations*. Routledge.
- Ramirez, A., Jr., Walther, J. B., Burgoon, J. K., & Sunnafrank, M. (2002). Information seeking strategies, uncertainty, and computer-mediated communication: Toward a conceptual model. *Human Communication Research*, 28, 213-228.
- Reardon, K. K. (1991). *Persuasion in practice*. Sage.
- Reardon, K. K., & Rogers, E. M. (1988). Interpersonal versus mass media communication: A false dichotomy. *Human Communication Research*, 15(2), 284-303.
- Roberts, B. W., & DeVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, 126(1), 3-25.
- Roberts, N., & Thatcher, J. (2009). Conceptualizing and testing formative constructs: Tutorial and annotated example. *ACM SIGMIS Database*, 40(3), 9-39.
- Rogers, E. M. (1999). Anatomy of the two subdisciplines of communication study. *Human Communication Research*, 25(4), 618-631.
- Roy, G., Datta, B., & Basu, R. (2017). Trends and future directions in online marketing research. *Journal of Internet Commerce*, 16(1), 1-31.

- Schrader, D. C., & Dillard, J. P. (1998). Goal structures and interpersonal influence. *Communication Studies*, 49(4), 276-293.
- Sheth, J. N. (1971) Word of mouth in low risk innovations. *Journal of Advertising Research*, 11, 15-18.
- Shevchuk, N., & Oinas-Kukkonen, H. (2016). Exploring green information systems and technologies as persuasive systems: A systematic review of applications in published research. In *Proceedings of the 37th International Conference on Information Systems*.
- Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. John Wiley and Sons.
- Straub, D., Boudreau, M. C., & Gefen, D. (2004). Validation guidelines for I.S. positivist research. *Communications of the Association for Information Systems*, 13, 380-427.
- Subramani, M. (2004). How do suppliers benefit from information technology use in supply chain relationships? *MIS Quarterly*, 28(1), 45-73.
- Sujan, M. (1985). Consumer knowledge: Effects on evaluation strategies mediating consumer judgments. *Journal of Consumer Research*, 12, 31-46.
- Sundar, S. S., & Nass, C. (2000). Source orientation in human-computer interaction: Programmer, networker, or independent social actor. *Communication Research*, 27(6), 683-703.
- Tanis, M. A., & Postmes, T. (2003). Social cues and impression formation in CMC. *Journal of Communication*, 53(4), 676-693.
- Vessey, I., & Galletta, D. (1991). Cognitive fit: An empirical study of information acquisition. *Information Systems Research*, 2(1), 63-84.
- Volkema, R. J., Fleck, D., & Hofmeister, A. (2011). Getting off on the right foot: The effects of initial email messages on negotiation process and outcome. *IEEE Transactions on Professional Communication*, 54(3), 299-313.
- Wacker, J. G. (2008). A conceptual understanding of requirements for theory-building research: Guidelines for scientific theory building. *Journal of Supply Chain Management*, 44(3), 5-15.
- Walther, J. B. (2017). The merger of mass and interpersonal communication via new media: Integrating metaconstructs. *Human Communication Research*, 43(4), 559-572.
- Walther, J. B., & D'Addario, K. P. (2001). The impacts of emoticons on message interpretation in computer-mediated communication. *Social Science Computer Review*, 19(3), 324-347.
- Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (3rd ed., pp. 529-563). Sage.
- Walther, J. B., Van Der Heide, B., Hamel, L. M., & Shulman, H. C. (2009). Self-generated versus other-generated statements and impressions in computer-mediated communication. *Communication Research*, 36(2), 229-253.
- Wang, Y. D., & Emurian, H. H. (2005). An overview of online trust: Concepts, elements, and implications. *Computers in Human Behavior*, 21(1), 105-125.
- Weisberg, J., Te'eni, D., & Arman, L. (2011). Past purchase and intention to purchase in e-commerce: The mediation of social presence and trust. *Internet Research*, 21(1), 82-96.
- Wilson, E. V. (2005). Persuasive effects of system features in computer-mediated communication. *Journal of Organizational Computing and Electronic Commerce*, 15(2), 161-184.
- Wilson, E. V. (2015). Understanding how message receivers' communication goals are applied in online persuasion. In T. MacTavish & S. Basapur (Eds.), *Persuasive technology* (pp. 39-50). Springer.
- Wilson, E. V., & Djasasbi, S. (2013). Developing and validating feedback and coherence measures in computer-mediated communication. *Communications of the Association for Information Systems*, 32, 159-174.

- Wilson, E. V., & Djasasbi, S. (2015). Human-computer interaction in health and wellness: Research and publication opportunities. *AIS Transactions on Human-Computer Interaction*, 7(3), 97-108.
- Wilson, E. V., & Lankton, N. K. (2012). Some unfortunate consequences of non-randomized, grouped-item survey administration in I.S. research. In *Proceedings of the 2012 International Conference on Information Systems*.
- Wilson, E. V., & Lu, Y. (2008). A communication goals model of compliance-gaining in computer-mediated communication. *Computers in Human Behavior*, 24, 2554-2577.
- Wilson, E. V., & Zigurs, I. (1999). Decisional guidance and end user display choices. *Accounting, Management and Information Technologies*, 9, 49-75.
- Wilson, E. V., & Zigurs, I. (2001). Interpersonal influence goals and computer-mediated communication. *Journal of Organizational Computing and Electronic Commerce*, 11(1), 59-76.
- Wilson, E. V., Djasasbi, S., & Hall-Phillips, A. (2017a). Cognitive factors that lead people to comply with spam email. *Journal of Organizational Computing and Electronic Commerce*, 27(2), 118-134.
- Wilson, E. V., Srite, M., & Loiacono, E. (2017b). A call for item-ordering transparency in online I.S. survey administration. In *Proceedings of the 22nd Americas Conference on Information Systems*.
- Wilson, E. V., Srite, M., & Loiacono, E. (2021). Effects of item-ordering reproducibility in information systems online survey research. *Communications of the Association for Information Systems*, 49, 760-799.
- Win, K. T., Mullan, J., Howard, S. K., & Oinas-Kukkonen, H. (2017). Persuasive systems design features in promoting medication management for consumers. In *Proceedings of the 50th Hawaii International Conference on System Sciences*.
- Wright, R. T., Campbell, D. E., Thatcher, J. B., & Roberts, N. (2012). Operationalizing multidimensional constructs in structural equation modeling: Recommendations for I.S. research. *Communications of the Association for Information Systems*, 30, 367-412.
- Zaichkowsky, J. L. (1986). Conceptualizing involvement. *Journal of Advertising*, 15(2), 4-34.
- Ziegler, R., Diehl, M., & Ruther, A. (2002). Multiple source characteristics and persuasion: Source inconsistency as a determinant of message scrutiny. *Personality and Social Psychology Bulletin*, 28(4), 496-508.

Appendix A

Table A1. Scales Used in This Study

Construct	Item label: item text	Response labels
Feedback	Feedback1: If I replied to this message, my reply would be read.	1 = strongly disagree / 7 = strongly agree
	Feedback2: If I replied to this message, the person who sent it would read my reply.	1 = strongly disagree / 7 = strongly agree
	Feedback3: If I replied to this message to ask a question, someone would respond to answer my question.	1 = strongly disagree / 7 = strongly agree
	Feedback4: If I replied to this message to ask for a small change in the terms, my request would be met.	1 = strongly disagree / 7 = strongly agree
Coherence	Coherence1: For me, this message is:	1 = a misfit / 7 = a good fit
	Coherence2: For me, this message is:	1 = not applicable / 7 = applicable
	Coherence3: This message has personal relevance to me.	1 = strongly disagree / 7 = strongly agree
	Coherence4: This message fits with my interests.	1 = strongly disagree / 7 = strongly agree
Benefit Goals	Benefit1: I feel complying with the request would actually be good for me.	1 = strongly disagree / 7 = strongly agree
	Benefit2: I am looking forward to positive things resulting from this message.	1 = strongly disagree / 7 = strongly agree
	Benefit3: I am interested in benefits the message might have for me.	1 = strongly disagree / 7 = strongly agree
Cost Goals	Cost1: I am concerned about personal costs of complying with this request.	1 = strongly disagree / 7 = strongly agree
	Cost2: I am concerned that complying with this request might be bad for me.	1 = strongly disagree / 7 = strongly agree
	Cost3: I worry about the downsides for me that this message might produce.	1 = strongly disagree / 7 = strongly agree
Identity Goals	Identity1: I am concerned about being true to my values and myself.	1 = strongly disagree / 7 = strongly agree
	Identity2: I am concerned with not violating my own ethical standards.	1 = strongly disagree / 7 = strongly agree
	Identity3: It is important to me that I represent myself honestly.	1 = strongly disagree / 7 = strongly agree
Interaction Goals	Interaction1: I don't want to look stupid to the message sender.	1 = strongly disagree / 7 = strongly agree
	Interaction2: I will be careful to avoid interacting in a way that is socially inappropriate.	1 = strongly disagree / 7 = strongly agree
	Interaction3: I am concerned with putting myself in a bad light in this situation.	1 = strongly disagree / 7 = strongly agree
Arousal Management Goals	Arousal1: The potential of this message for making me nervous and uncomfortable worries me.	1 = strongly disagree / 7 = strongly agree
	Arousal2: I am afraid of being uncomfortable or nervous.	1 = strongly disagree / 7 = strongly agree
	Arousal3: I worry that this message could make me anxious.	1 = strongly disagree / 7 = strongly agree
Social Presence	Presence1: My feeling is that this message is:	1 = impersonal / 7 = personal
	Presence2: c_sp2: My feeling is that this message is:	1 = hot / 7 = cold

Table A1. Scales Used in This Study

	Presence3: My feeling is that this message is:	1 = insensitive / 7 = sensitive
	Presence4: c_sp4: My feeling is that this message is:	1 = dehumanizing / 7 = humanizing
Trust	Trust1: I believe the sender of the "need your help" email message is honest.	1 = strongly disagree / 7 = strongly agree
	Trust2: I believe the sender of the "need your help" email message cares about me.	1 = strongly disagree / 7 = strongly agree
	Trust3: I believe the sender of the "need your help" email message is opportunistic.	1 = Strongly disagree / 7 = strongly agree
	Trust4: I believe the sender of the "need your help" email message is predictable.	1 = strongly disagree / 7 = strongly agree
	Trust5: I believe the sender of the "need your help" email message is trustworthy.	1 = strongly disagree / 7 = strongly agree
Intention to Comply	Comply1: How likely is it you would comply with the request made in the "need your help" email message?	1 = very unlikely / 7 = very likely
	Comply2: If I actually received the "need your help" email message, I would do what it requests.	1 = strongly disagree / 7 = strongly agree
	Comply3: I would pledge to donate at least one book if I actually received the "need your help" email message.	1 = strongly disagree / 7 = strongly agree
	Comply4: I would not pledge to donate any books if I received the "need your help" email message.	1 = strongly disagree / 7 = strongly agree (<i>reverse coded</i>)
We collected all responses on seven-point semantic differential measures.		

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E. Vance Wilson is an associate teaching professor at Worcester Polytechnic Institute. His research focuses on organizational aspects of human-computer interaction with a special emphasis on e-health, computer-mediated communication, and online persuasion. He is a past president of AIS SIGHealth.

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