

Expanding the Impression Management Model of Communication Channels: An Information Control Scale

Dr. John Christian Feaster, Assistant Professor,

Rowan University, Email: feaster@rowan.edu

According to O'Sullivan's (2000) impression management model of communication channels, individuals will prefer to use mediated channels rather than face-to-face conversation in face-threatening situations. Within his model, this trend is due to the channel features that allow for control over exchanged social information. The present paper extends O'Sullivan's model by explicating information control as a media affordance, arising from channel features and social skills, that enables an individual to regulate and restrict the flow of social information in an interaction, and present a scale to measure it. One dimension of the information control scale, expressive information control, positively predicted channel preference for recalled face-threatening situations. This effect remained after controlling for social anxiousness and power relations in relationships.

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In recent years, the topic of self-presentation has received increasing attention in the study of computer-mediated communication (CMC, Bargh, McKenna, & Fitzsimons, 2002; Boyle & Johnson, 2008; Ellison, Heino, & Gibbs, 2006; O'Sullivan, 2000; Sanderson, 2008; Schau & Gilly, 2003; Walther, 2007). Prior to O'Sullivan's (2000) impression management model of communication channels, several prominent approaches to mediated interpersonal communication held the assumption that text-based channels, common in computer-mediated contexts, were either inappropriate or less preferred in complex communication situations (i.e. involving more than simple transmission or exchange of information) than channels that added voice, context, visual qualities to interaction such as face-to-face conversation (Daft & Lengel, 1984, 1986; Rice, 1993; Short, Williams, & Christie, 1976; Sproull & Kiesler, 1986). Contrary to this assumption, O'Sullivan's (2000) findings suggested that individuals strategically prefer interpersonal channels with fewer social cues when threats to their self-presentation arise.

Although O'Sullivan's (2000) findings were groundbreaking, it shall be argued that his model may be extended. O'Sullivan noted that face-threatening situations may be complex due to the struggle individuals face between the tension between expression and privacy. He argued that some communication channels may help

individuals manage this struggle and therefore be more preferred as those situations arise. O'Sullivan's model was based on an assumption that channels with features that allow fewer social cues, such as reduced nonverbal information or slower exchange of messages, invariably afford an individual with an ability to better manage the flow of a complex, ambiguous, or potentially difficult conversations.

A potential limitation of O'Sullivan's approach is that it, like many other approaches to computer-mediated communication, placed too great of an emphasis on the channel features in determining how media afford individuals in communication processes. Although some approaches to the concept of "affordances" have discussed them as merely features, resources, or opportunities available in an environment (i.e. channel features in a mediated communication environment), more recent perspectives have discussed them as relationships or *intersections* between an individual and some environmental feature that affect outcomes for that individual (Chemero, 2003). Consistent with that approach, *media affordances* have been conceptualized as the emergent intersections between the features of a channel (e.g., text-based communication) and the qualities of an individual who uses that channel (e.g., ability to craft quality messages using text) that drive outcomes in mediated communication environments (Rabinowitz, 2004; see also van Dijk, 2004, for a similar conceptualization of media capacities).

Using this approach to media affordances and Goffman's (1963) concept of information control to extend O'Sullivan's (2000) model, *information control* shall be conceptualized as a media affordance that affects an individual's ability to regulate or restrict the flow of social information during interactions over a medium of interpersonal communication. This ability shall be argued to subsequently lead to patterns of channel preference in social situations that involve threats to self-presentation. What follows is a review of the literature pertaining to self-presentation and the importance of control followed by a discussion framing information control as a media affordance. Following that, an empirical investigation testing the efficacy of an information control scale for predicting channel preference in face-threatening social situations will be presented.

Self-Presentation, Face-Threats, and Control

In the course of everyday life, individuals must present themselves in a manner that allows them to participate within their social collectives, such as relationships, groups, and cultures, in order to satisfy their personal goals. In the process of this presentation, Goffman (1967) argued that individuals are constantly working to preserve their *face*, or desirable personal image, in essentially every social encounter with other human beings. If face is not maintained as desired, there can be negative consequences such as embarrassment or imposition in virtually any encounter regardless as to whether it occurs in a face-to-face (FTF) or mediated context.

Building on Goffman's (1967) discussion of face, Brown and Levinson (1987) argued that face concerns may be categorized into two complementary dimensions; positive and negative face. The two dimensions pertain to desires of approach and

avoidance regarding interaction with others. *Positive face* self-presentational concerns lead individuals to approach or engage with others to foster social connections. *Negative face* self-presentational concerns lead individuals to disengage from others or exercise restraint in expression out of the interest of respecting boundaries and/or maintaining independence. According to Brown and Levinson, all interactions have some blend of both positive and negative face concerns that may affect how individuals elect to present themselves.

Given the continual presence of face concerns and the fluid nature of interaction, Goffman (1967) and Brown and Levinson (1987) asserted that all social encounters involve actions that have the potential to threaten the face concerns of individuals as well as those with whom they interact. In line with their dimensions of face-concern, Brown & Levinson categorized these actions into positive and negative face-threatening acts. *Positive face-threatening acts* are social actions that undermine an individual's wish to be connected to others or seen in a positive light. For example, embarrassing social situations such as receiving an insult or having some undesirable quality revealed could be considered positive face-threatening acts. *Negative face-threatening acts* are social actions that undermine an individual's wish to be autonomous or undisturbed by others. For example, imposing or inconvenient social situations such as asking for assistance or facing some undesirable obligation could be considered negative face-threatening acts. Both of these face-threat types can undermine the self presentation concerns of anyone involved in a conversation. As such, it is the responsibility of all involved to manage the interaction in a way that supports both their own face concerns as well as those of others (Brown & Levinson, 1987; Goffman, 1967).

Obviously, however, individuals are not always successful in managing interactions in ways that overcome face-threats. Embarrassment, inconvenience, and imposition are not always avoidable, but action is commonly taken to try to avert them. In discussing individuals facing a potential stigma, a severe form of face threat, Goffman (1963) argued that individuals must perform what he called *information control* to properly manage social encounters. In the process of information control, he noted that individuals must handle

the issue. . . of managing information about one's failing. [Questions arise regarding] to display or not to display, to tell or not to tell, to let on or not to let on; to lie or not to lie, and in each case to whom, how, when, and where (p. 42).

Although Goffman's (1963) discussion of information control and its importance for managing one's social image and those of others was seminal, it was rather broad and at points, ambiguous. Various approaches to control in interactions that followed Goffman's treatment were discussed in more explicit terms and applied the concept to situations beyond just those that involve stigma. Parks (1985, 1994) offered an expansive review of such approaches and proposed a streamlined perspective. Within his perspective of control, Parks considered and explicated issues ranging from concrete factors such as the management of one's body to more abstract factors

such as the negotiation and sequencing of the flow of social situations. His review and perspective included concepts such as: interaction management/control (Argyle, 1969; Wiemmann, 1977), adaptability (Duran, 1983; 1992), empathy, conversation management (Wiemann & Backlund, 1980), and other concepts introduced later such as information manipulation (McCornack, 1992; 1997) and boundary management (Petronio, 1991, 2002) additionally reflect control as discussed by Parks (1985, 1994).

Drawing from Goffman's (1963) and Parks' (1985, 1994) arguments regarding control, it is apparent that an individual must recognize the demands of social situations and negotiate potential downfalls when communicating with others that could tarnish his/her image or that of an interaction partner. Upon making this recognition, s/he must control the information exchanged to ensure that what is desirable to her/his image (face supporting) is expressed and what is damaging (face-threatening) is kept private. In O'Sullivan's (2000) words, "individuals [must work] to regulate what information about oneself is known (and what is not known) by others in order to manage the impression that others have of them" (p. 405–405). More specifically, information control is the regulation or restriction of the flow of information during an interaction that best manages both those needs for expression and needs for privacy (Petronio, 1991, 2002; Rawlins, 1983).

In an example of information control in the presence of tension between expression and privacy needs, an individual facing an embarrassing personal family issue may encounter an old friend who is acquainted with the family. Out of the interest of maintaining the friendship, the individual may be compelled or even asked to discuss matters related to family. In order to address both needs for expression and privacy, proper information control for both parties will involve a number of actions that are consistent with Parks' (1985, 1994) view of control. In such a conversation, individuals must be able to detect changes in the interaction or changes in their partner such as signs of interest, discomfort, or anger. In response to such detections, individuals will need to be able to adapt and alter the flow of the interaction such as changing the subject, calming down emotions, or slowing down the pace of the conversation. If such actions are implausible, actions to exit the conversation such as a polite goodbye or excuse are necessary. Collectively, these actions of information control manage needs of expression and privacy in face-threatening situations and contribute to the pursuit of desirable outcomes. The next two sections shall discuss how communication channels support the performance of these actions.

Information Control and Media Use

Although issues of information control and the management of the tension between expression and privacy needs have predominantly been considered in face-to-face (FTF) contexts, some attention has been given to these processes as they occur in the arena of mediated interpersonal communication. As discussed in the introduction, O'Sullivan (2000) advocated in his impression management model of communication channels that when self-presentation concerns are threatened, individuals strategically prefer channels with fewer social cues. This claim was contrary to several

traditional approaches to mediated communication such as social presence (Rice, 1993; Short et al., 1976), media richness (Daft & Lengel, 1984, 1986), or social context cues (Sproull & Kiesler, 1986) that advocated that channels with features that allow for *more* social cues should be preferred in most situations, particularly those that pose some difficulty.

Based on Weimann's (1977) concept of interaction management/control, O'Sullivan (2000) deduced that the information constraining features of a less rich channel such as text-based CMC allows individuals to better manage their self presentational needs and derive more positive outcomes during face-threatening situations. In support of this, O'Sullivan (2000) noted that in a prior study of interpersonal media and long distance relationships, respondents reported advantages with regard to "the capacity to control the timing, duration, and nature of information exchanged during these interactions" (p. 412). In an empirical analysis of his claims, O'Sullivan found that mediated forms of communication were generally preferred over face-to-face conversation in face-threatening situations. His findings imply the following prediction:

H1: Mediated channels will be more preferred than FTF conversation in face-threatening communication situations.

Although O'Sullivan's (2000) arguments regarding strategic media use were innovative, the present paper argues that his rationale can be expanded upon. While acknowledging that the capacity of a medium to convey information has some effect, the author argues that different individuals have different degrees of control over social information exchanged during interactions over different interpersonal media. Due to how a medium uniquely affords them, some individuals may have greater abilities to manage their needs for expression and privacy in a social encounter even when if that channel happens to have features that allow for more social cues. It is how those individuals are able (or unable) to use those features that affects this. This emergent media afforded information control will be explicated in the next section.

Information Control as Emergent From Media Affordance

As discussed previously, O'Sullivan's (2000) arguments regarding channel preference in face-threatening situations were largely based on features of a medium (e.g., media richness; Daft & Lengel, 1984, 1986). Although features have an undeniable impact on the dynamic of a social interaction, placing too much emphasis on features can in effect exclude the communicator from the communication situation. In short, O'Sullivan discussed features as conceptually equivalent to media affordances. As also noted above, this paper includes the assumption that interpersonal communication channels afford different users in different ways due to the *intersections* between media features and the characteristics and skills of those individuals (Rabinowitz, 2004; van Dijk, 2004). Taking this approach to media affordances in consideration of information control shall provide a greater degree of explanatory power to O'Sullivan's (2000) model.

Information control as a media affordance refers to how the use of a medium amplifies or attenuates an individual's ability to perform actions that allow him/her to regulate or restrict the flow of social information during interactions due to the intersection between the features of the channel and the social skills of the individual. This definition of information control provides greater explanatory power with regard to how communication channels support the process of self presentation than older approaches. For example, according to O'Sullivan's (2000), a channel such as a e-mail would afford an individual with greater control over an interaction than FTF because the feature of asynchronous, or nonimmediate, message exchange allows greater time to plan and edit messages. According to the approach to media affordances used in this paper and the definition of information control above, this feature would be irrelevant unless the individual has the knowledge and ability to plan and edit such messages (i.e. the asynchronous feature intersects with the planning/editing skills of the user). Furthermore, the features of FTF that allow for synchronous message exchange and nonverbal cues may *also* afford an individual with greater information control if the individual has the ability to sense changes in the flow of an interaction and put on a convincing and poised performance in the presence of face-threats (Goffman, 1967). Since FTF is often considered (sometimes erroneously) the default form of communication (Sundar, 2009), such a performance would additionally be more likely to be interpreted as more sincere and genuine than if handled over some other channel. Although this treatment of information control during media use is new, previous studies have found support for the relationship between experience and skills of an individual and perceptions and uses of interpersonal channels (Carlson & Zmud, 1999; Schmitz & Fulk, 1991).

As discussed above, information control is necessary for the purpose of managing a tension between expression and privacy to overcome face threats in the course of an interaction (Brown & Levinson, 1987; Petronio, 1991; 2002; Rawlins, 1983). Thus, a person must be afforded with the ability to address either or both needs in order to manage the tension between them in some way. For this reason, information control as a media affordance shall be treated as a two-dimensional construct made up of *expressive information control* and *privacy information control*.

Expressive information control is the degree to which use of a medium affords an individual with the ability to *regulate* the flow of information revealed/expressed (verbally or nonverbally) during an interaction. This dimension pertains to addressing positive face concerns as discussed by Brown and Levinson (1987). Many of the forms of control as discussed by Parks (1985, 1994) relate directly to expressive information control as it is defined in this paper. Those who are afforded with greater degrees of expressive information control from a medium are better able to utilize the qualities of that medium to: 1) present social information that is supporting to their face-concerns, 2) direct the flow of interactions in line with their intentions, 3) sense changes in the demands of a social situation, 4) adapt their communication accordingly, and 5) increase or decrease the pace and flow of the interaction.

Privacy information control pertains to the degree to which a use of a medium endows an individual with the ability *restrict* or *halt* certain forms of information from entering into an interaction. This dimension pertains to addressing negative face concerns as discussed by Brown and Levinson (1987). Burgoon (1982) noted that privacy concerns reside within several dimensions that pertain to issues both within and outside of social encounters. Of her conceptualized dimensions, two are relevant to privacy concerns localized within an interaction. First, the *social dimension* pertains to privacy in regard to what is explicitly said or implicitly referenced. Second, the *psychological dimension* pertains to privacy in regard to what is thought or felt that an individual does not wish to express. In protecting these dimensions of privacy, those who are afforded with greater degrees of privacy information control from a medium are better able to utilize the qualities of that medium to: 1) manage the length, content, and personal nature of an interaction, 2) control the revelation of thoughts and feelings during the encounter, and 3) acknowledge or ignore social missteps or violations.

As has been repeated throughout this discussion, individuals must manage a tension between expression and privacy as face threats emerge (Brown & Levinson, 1987; Petronio, 1991; 2002; Rawlins, 1983). In such situations, individuals will likely prefer the medium that affords the greatest expressive and privacy information control. The greater degree of information control a medium affords an individual through use, the greater will be that individual's expected satisfaction with the result, and hence, the individual's preference for using that medium. The preceding discussion leads to the following prediction:

H2: Reports of afforded expressive and privacy information control affordances from use of a medium will be positively related to preference for using that medium in face-threatening situations.

Although information control emerging from the intersection between users and communication channels may lead to channel preference in face-threatening social situations, some individual as well as some contextual factors may be competing explanations for channel preference. In the present paper, social anxiousness, a personality trait related to sensitivity and/or fear of face threats, as well as the power relations between an individual and her/his interaction partner, an issue of context, shall be examined.

Social Anxiousness

Leary (1983) defined social anxiety as "a state of anxiety resulting from the prospect or presence of interpersonal evaluation in real or imagined social settings" (p. 67). Social anxiousness, he went on to define as "the frequency and/or intensity with which people tend to experience anxiety across situations and time" (p. 68). Effectively, social anxiousness is a personality trait that leads to an amplified concern for face threats that may arise during interactions. Deducing that social anxiety most directly impacts individuals in FTF encounters, McKenna, Green, and Gleason (2002) found that people of greater social anxiousness were found to be enabled to communicate

in ways that make them more likeable and take on more leadership qualities when communicating over computer-mediated channels compared to richer channels. In line with their findings, the following prediction is presented:

H3: Social anxiousness will be negatively related to preference for FTF conversation and positively related to preference for non-FTF channels in face-threatening situations.

Given this prediction, social anxiousness is a potential competing explanation for preference of different channels in face-threatening situations. The predictive effect of information control presented in hypothesis two could be reduced if social anxiety is considered. Therefore, the following research question is posed:

RQ1: Do reports of afforded privacy and expressive information control from use of a medium still positively predict preference for that channel in face-threatening situations after controlling for social anxiousness?

Power Relations in Context

As is commonly assumed in communication studies, communication is largely affected by context (Watzlawick, Beavin, & Jackson, 1967). In addressing context, Brown and Levinson (1987) highlighted the importance of the power relations between those involved in a face threatening social situation for determining the “weightiness” or strength of a face threat. As such, power relations between an individual and an interaction partner may affect that individual’s channel preference. According to French and Raven (1960), power relations may take a variety of forms including capacities to punish [coercive power], capacities to provide resources [reward power], official entitlements [legitimate power], caring or friendship [referent power], or dependence on another’s special knowledge or skills [expert power]. Given the potential for different forms of power relations to affect channel selection in face-threatening situations, it is asked:

RQ2: How do differences in power relations between an individual and a communication partner affect that individual’s preference for different communication channels in face-threatening situations?

Due to this prediction, like social anxiousness, the power relations one has with a communication partner is a potentially competing explanation for channel preference to afforded information control. It is therefore asked:

RQ3: Do reports of afforded privacy and expressive information control from use of a medium still positively predict preference for that channel in face-threatening situations after controlling for different power relations between an individual and an interaction partner?

Method

Participants

This study recruited students from an introductory communication course at a large university in the Midwestern United States. In exchange for course credit,

241 participants completed the study. The sample was made 40.1% males and 59.9% Females. The participants ranged in age from 18 to 49 years ($M = 22.08$, $SD = 3.71$). The sample was made up mostly of Caucasians (73.1%) but had individuals from African American (11.3%), Asian (5.9%), Hispanic (3.4%), and other ethnic backgrounds (6.3%).

Procedure and Instrumentation

Participants were asked to access an online questionnaire. After providing consent, they were asked to respond to items measuring factors relating to a recent face-threatening communication situation and the relationship that existed between themselves and others involved in the situation. After that, they were asked to respond to items measuring levels of afforded expressive and privacy information control using FTF conversation, telephone, instant messaging (IM), and e-mail; social anxiousness as a personality trait; and general demographic information.

As noted above, Brown and Levinson (1987) argued that face-threats may pertain to sociability/connection (positive face-threats) or autonomy/privacy (negative face-threats) and may be localized around one's self or another person in the interaction. To address the different forms and loci of face threats posed by Brown and Levinson (1987), four versions of the same questionnaire were used. In all versions, the participants were asked to recall a recent communication situation where they needed to discuss an issue with another person. The root sentence for this was "Think for a moment and try to remember a time recently when you discussed something with someone that was potentially. . ." The versions varied in the words that followed the word "potentially." The wording variants included (1) "embarrassing for you," (2) "embarrassing for him/her," (3) "imposing or inconvenient for you," and (4) "imposing or inconvenient for him/her."

As a manipulation check for the four conditions, face-threats were measured by participants reporting the levels of: embarrassment they expected for themselves (positive self face-threat), embarrassment they expected for the other person (positive other face threat), imposition they expected for themselves (negative self face threat), and imposition they expected for the other person (negative other face threat) prior to the interaction on a 10-point scale (1—none at all, 10—A great deal).

Two computer-mediated channels (e-mail and instant messaging) and two traditional channels (FTF conversation and voice telephone) were the focus of this investigation. The two computer-mediated channels were selected because their prevalence of use by the sampled population at the time of data collection (as deduced from several use studies conducted using this population) and because they were more likely used predominantly for interpersonal communication purposes compared to other computer-mediated channels such as personal websites or social networking sites. The traditional communication channels were included since they would be the preferred channels according to the older approaches to mediated interpersonal communication discussed above such as social presence (Rice, 1993; Short et al., 1976), media richness (Daft & Lengel, 1984; 1986), or social context cues,

(Sproull & Keisler, 1986). Preference for using a medium in the communication situation was measured with the question, "Regardless of whatever you actually used, how preferable would each of the following have been for use in the interaction?" Under this statement were four 10-point scales (1—Not at all preferable, 10—Highly Preferable) that corresponded to the four interpersonal channels under analysis.¹

In assessing information control, it was assumed that individuals may not be fully aware of all the ways in which they are afforded (or hindered) by communication channels, but that they are aware of their abilities to perform actions that are indicators of those affordances. In other words, individuals may not be aware of *how* they perform actions, but they are aware that they *can* perform them. Thus, to measure expressive and privacy information control, a scale was developed to assess respondents' perceived abilities to perform the actions described above that are involved with expressive and privacy information control. The expressive dimension items were developed from the different actions pertaining to control during an interaction as discussed by Parks (1985, 1994). The privacy information control items were developed on actions pertaining to protecting different dimension of as discussed by Burgoon (1982). Eighteen items were written as statements of actions performed within interactions. These items are listed in Appendix 1. Items 1 through 14 were designed to measure expressive information control and items 15 through 18 were designed to measure privacy information control. Respondents reported their level of agreement that they could perform each action when conversing through FTF conversation, Telephone, Instant Messaging (IM), and Email on a 7-point Likert scales (1 = Strongly Disagree – 7 = Strongly Agree). The factor analysis and reliabilities for the resulting factors will be reported in the results section.

Social anxiousness was measured using Leary's (1983) interaction anxiousness scale. Respondents reported their level of agreement with each of the statements on 7-point Likert scales (1 = Strongly Disagree – 7 = Strongly Agree). Although most of the items in the scale pertain to general interaction anxiousness, one item, "I often feel nervous when calling someone I don't know very well on the telephone" is medium specific. As this is a study of interpersonal media and to some extent, media comparison, this item was deemed inappropriate for the analyses and was not used. The scale produced an acceptable reliability, ($\alpha = .877$) and removal of none of the items produced any increase in this reliability. A single social anxiousness index ($M = 3.52$, $SD = 1.25$) was created by calculating the mean of the 14 items for each respondent.

The different power relations were measured using items reflective of the different dimensions of power as discussed by French and Raven (1960). For responses to each item, respondents were asked to consider their relationship to their interaction partner at the time of the interaction. On a 10-point scale ranging from "None at all" to "A great deal," referent power was measured by asking respondents to report the extent to which they: 1) valued the relationship, 2) respected the person, 3) liked the person, 4) felt obligated to the person. On a 10-point continuum ranging from "Me" to "Other Person," the remaining power dimensions were measured by asking

respondents to report the balance in the relationship with regard to who has the greater: 1) ability to reward the other person, 2) ability to punish the other person, 3) dependence on the other person, and 4) power in the relationship. It was explained in the instructions that midpoint responses reflected an even balance on the dimensions. For all items, greater values indicated greater power on behalf of the other person.

Results

Factor Analyses

Since it was assumed that the different forms of power would be correlated, a principle component analysis with varimax rotation was used to determine if the items could be reduced to uncorrelated components. Components were required to produce an Eigenvalue greater than one to be retained. Using McCroskey and Young's (1979) .60-.40 criterion, it was necessary to remove the "dependence on the other person" item. After removing that item and repeating the analysis, a two component solution (labeled as referent and authority components) emerged that explained 73% of the total variance. The referent component included all four items described above that were originally intended to measure referent power and had rotated factor loadings ranging from 0.80 to 0.95. The authority component included the items assessing the balance with regard to abilities to reward and punish and the overall power in the relationship, and had rotated factor loadings ranging from 0.71 to 0.84. The Cronbach's Alpha reliabilities for the referent ($M = 7.54$, $SD = 2.22$) and authority ($M = 5.21$, $SD = 1.78$) components were 0.93 and 0.67 respectively. Judging from the descriptive statistics, a majority of the recalled interactions were with individuals whom the respondents valued socially and who were relatively balanced with the respondents with regard to authority (mean is close to midpoint value).

The 18 information control items were factor analyzed using principal axis factoring with direct oblimin (Oblique) rotation. An oblique rotation was used because it was deemed inappropriate to assume that the dimensions of information control would be uncorrelated. In the initial factor analyses, factors were required to produce Eigenvalues greater than 1.0 to be retained. For items to be retained within a factor they needed to produce a primary loading of at least .45 with no secondary loadings within .2 of the primary loading. These criteria are fairly liberal compared to some prevalent "rules of thumb" used within communication research such as McCroskey and Young's (1979) .60-.40 criterion. McCroskey and Young, however, noted that "in exploratory investigation of a construct, we would suggest the utilization of a more liberal criterion. Similarly, when any rotation method other than varimax is employed, the .60-.40 criterion is meaningless" (p. 380). The rules used in these analyses are more conservative than other criteria discussed in the literature such as Bernstein's (1988) .30 or Steven's (2002) .40 minimum loading criteria as cited by Reinard (2006).

After applying the retention rules in the analyses, two items (Unintended and Misunderstand, see Appendix 1) were dropped for all four channels and two additional items (Terminate and Calm) were dropped for telephone. Across the four channels,

two or three factors emerged. For the channels where three factors emerged, it was observed that factor one (made up of expressive information control items) and factor three were highly correlated and had many cross loadings between them. Additionally, the items that loaded in factor three produced no unique interpretation from factor one. Thus, it was interpreted that these two factors should be treated as a single factor. The factor analyses were repeated with a specified two factor solution for all four channels. Using the same inclusion rules described above, none of the remaining items were deemed appropriate for removal for any of the four channels. The two factors that emerged were consistent with the expressive and privacy forms of information control as conceptualized for all four channels. The indices for expressive information control and privacy information control were created for each medium by calculating the mean of the responses for the items that were retained within their respective factors for each respondent. The loadings for the items that were retained within these factors and the descriptive statistics for the resulting indices are reported in Table 1.

Manipulation Check

Prior to hypothesis testing, it was additionally necessary to determine the effect of the face-threat questionnaire manipulations. According to analyses of variance (ANOVA), as expected from the manipulation, there were significant differences among conditions for ratings of expected self-embarrassment, $F(3,235) = 5.15$, $p < .05$, $\eta^2 = .039$; expected other-embarrassment, $F(3,232) = 6.033$, $p < .001$, $\eta^2 = .072$; expected self-imposition, $F(3,233) = 3.187$, $p < .05$, $\eta^2 = .039$; and expected other-imposition, $F(3,232) = 2.7455$, $p < .05$, $\eta^2 = .034$. According to the mean face-threat reports for each condition reported in Table 2, each condition had the desired effect. Furthermore, there were no significant differences for preference for FTF conversation, $F(3,231) = 1.90$, $p = .131$, $\eta^2 = .024$; telephone, $F(3,231) = .83$, $p = .479$, $\eta^2 = .011$; IM, $F(3,231) = 1.26$, $p = .287$, $\eta^2 = .016$; or e-mail, $F(3,231) = 1.29$, $p = .279$, $\eta^2 = .016$, across the four conditions. In summary, although the different situation types produced different levels of face threats (as intended to necessitate information control), the situation type did not directly affect preference for any of the channels. Given that preference for any of the channels did not vary significantly across the different situations, all of the conditions were analyzed together for hypothesis testing.²

Hypotheses and Research Questions

Hypothesis one predicted that mediated communication channels would be preferred over FTF conversation in face-threatening situations. This hypothesis was based on the claims within O'Sullivan's impression management model and was, in effect, predicting a replication of his findings. This hypothesis was tested using a within-subjects design ANOVA with posthoc contrast analyses. No support was found for this hypothesis. Although significant differences were found for the levels of preference between the channels $F(3,699) = 44.386$, $p < .001$, $\eta^2 = .160$, preference for FTF conversation ($M = 7.135$, $SD = 3.16$) was greater than preference for the telephone

Table 1 Rotated factor loadings for information control items

	FTF		Telephone		Instant Messaging		E-Mail	
	F1	F2	F1	F2	F1	F2	F1	F2
Expressive								
Recover	0.69	0.30	0.70	0.35	0.56	0.28	0.62	0.16
Present	0.84	0.25	0.78	0.30	0.67	0.40	0.63	0.19
Adapt	0.75	0.37	0.76	0.41	0.73	0.38	0.74	0.19
Needed	0.68	0.31	0.63	0.41	0.66	0.33	0.64	0.18
Detect	0.70	0.12	0.67	0.14	0.56	0.07	0.55	−0.09
Plan	0.67	0.35	0.64	0.35	0.66	0.28	0.61	0.20
Execute	0.82	0.23	0.80	0.35	0.79	0.37	0.69	0.32
Appropriate	0.81	0.21	0.79	0.25	0.73	0.42	0.55	0.31
Empathy	0.65	0.02	0.62	0.13	0.65	0.17	0.55	−0.05
Flow	0.71	0.21	0.69	0.25	0.68	0.26	0.61	0.14
Pace	0.65	0.25	0.70	0.35	0.66	0.25	0.59	0.14
Calm	0.48	0.26	Removed	Removed	0.57	0.21	0.57	0.18
Privacy								
Avoid	0.27	0.63	0.33	0.54	0.38	0.58	0.19	0.47
Terminate	0.32	0.62	Removed	Removed	0.37	0.80	0.16	0.80
HideEmotion	0.15	0.69	0.22	0.53	0.22	0.65	0.16	0.66
Ignore	0.24	0.85	0.28	0.94	0.26	0.72	0.15	0.68
Variance Explained	40.14%	10.92%	42.01%	8.84%	37.02%	8.85%	26.51%	10.60%
Cronbach's Alpha	.918	.787	.913	.705	.896	.787	.874	.769
Descriptive Statistics ¹	5.52(1.08)	4.18(1.38)	5.28(1.01)	4.52(1.31)	4.87(1.22)	5.514(1.21)	4.81(1.22)	5.61(1.19)

Note 1: The descriptive statistics in each column include the mean of the index calculated from the items that had sufficient loadings for a factor and the standard deviation reported in parentheses.

Table 2 Descriptive statistics for face-threat reports by condition

	Positive Self Face-Threat Condition	Positive Other Face-Threat Condition	Negative Self Face-Threat Condition	Negative Other Face-Threat Condition
Reported Self Embarrassment	5.21 (2.44)	3.85 (2.68)	4.28 (2.52)	4.22 (2.56)
Reported Other Embarrassment	4.07 (2.52)	6.23 (2.59)	4.53 (2.90)	4.894 (2.42)
Reported Self Imposition	5.00 (2.42)	4.03 (2.34)	5.42 (2.74)	4.45 (2.27)
Reported Other Imposition	4.49 (2.71)	4.90 (2.71)	4.45 (2.76)	5.603 (2.41)

Note: Standard deviations are reported in parentheses.

($M = 5.843$, $SD = 2.62$), IM ($M = 4.760$, $SD = 2.89$), and e-mail ($M = 4.114$, $SD = 2.94$). The posthoc contrast test confirmed that the differences between FTF preference and each of the other channels were statistically significant. In sum, FTF preference was greater than telephone $F(3,233) = 27.817$, $p < .001$, $\eta^2 = .107$, IM, $F(1,233) = 45.733$, $p < .001$, $\eta^2 = .164$, and e-mail, $F(1,233) = 70.991$, $p < .001$, $\eta^2 = .234$.

Hypothesis two predicted that greater reports of expressive and privacy information control afforded from a channel would predict greater preference for use of that channel in face-threatening situations. This hypothesis was tested using multiple regression with expressive and privacy information control entered as predictors of channel preference. All manipulation conditions were analyzed together, but separate regression models were estimated for each channel. Hypothesis two was supported for all four channels. The regression models were statistically significant for FTF, $F(2,232) = 13.709$, $p < .001$, telephone, $F(2,231) = 14.769$, $p < .001$, IM, $F(2,229) = 12.335$, $p < .001$, and e-mail, $F(2,231) = 12.541$, $p < .001$. Although support was found considering the two forms of control together, upon examining the individual slopes of the predictors in each model, the expressive information control variable was the only statistically significant predictor in each model. More specific details regarding each of these regression models are reported in Table 3 in the sections labeled "Information Control (H2)."

Hypothesis three predicted that social anxiousness would negatively predict preference for using FTF in face-threatening situations and positively predict preference for non-FTF channels. This hypothesis was tested using simple linear regression analyses for each channel with social anxiousness entered as a predictor and preference entered as the dependent variable. Hypothesis three received partial support. As expected, social anxiousness negatively predicted FTF preference, $F(2,232) = 10.770$, $p < .001$ and positively predicted IM preference, $F(2,230) = 8.266$, $p < .01$, and e-mail preference, $F(2,232) = 13.841$, $p < .001$. Social anxiousness, however, did not have a statistically significant relationship with preference for telephone, $F(2,232) = 1.924$, $p = .167$. More specific details regarding each of these regression models are reported in Table 3 in the sections labeled "Social Anxiousness (H3)."

Table 3 Preference for FTF, telephone, e-mail, and IM regressed on social anxiousness, power relations, and dimensions of information control

	FTF				Telephone			
	β	S.E.	t	ΔR^2	β	S.E.	t	ΔR^2
Information Control (H2)				0.106***				0.113***
Expressive	0.323***	0.200	4.917		0.287***	0.172	4.263	
Privacy	0.008	0.152	0.122		0.096	0.136	1.419	
Social Anxiousness (H3)	-0.211***	0.166	-3.282	0.044***	-0.091	0.139	-1.387	0.008
Power Dimensions (RQ2)				0.030**				0.016
Referent	0.196**	0.095	3.00		0.129	0.079	1.966	
Authority	-0.068	0.118	-1.043		-0.015	0.099	-0.233	
Block 1				0.075***				0.023
Referent	0.176**	0.094	2.734		0.122	0.079	1.840	
Authority	-0.055	0.116	-0.849		-0.008	0.100	-0.115	
Social Anxiousness	-0.192**	-0.192	-3.004		-0.080	0.140	-1.219	
Block 2 (RQ1 & RQ3)				0.052***				0.100***
Referent	0.121	0.094	1.859		0.068	0.077	1.066	
Authority	-0.026	0.115	-0.403		0.042	0.096	0.654	
Social Anxiousness	-0.097	0.175	-1.425		0.051	0.144	0.754	
Expressive Control	0.255***	0.219	3.551		0.297***	0.189	4.104	
Privacy Control	0.004	0.154	0.057		0.105	0.138	1.536	

Table 3 Continued

	E-Mail				IM			
	β	S.E.	t	ΔR^2	β	S.E.	t	ΔR^2
Information Control (H2)				0.098***				0.097***
Expressive	0.320***	0.159	5.006		0.328***	0.166	4.834	
Privacy	-0.057	0.158	-0.9		-0.053	0.163	-0.768	
Social Anxiousness (H3)	0.237***	0.153	3.72	0.056***	0.186***	0.153	2.875	0.035**
Power Dimensions (RQ2)				0.010				0.000
Referent	-0.100	0.089	-1.515		-0.011	0.088	-0.158	
Authority	0.028	0.111	0.427		0.009	0.111	0.137	
Block 1				0.052**				0.035**
Referent	-0.077	0.087	-1.188		0.008	0.087	0.122	
Authority	0.012	0.108	0.193		-0.002	0.110	-0.025	
Social Anxiousness	0.230***	0.154	3.573		0.187**	0.154	2.858	
Block 2 (RQ1 & RQ3)				0.099***				0.110***
Referent	-0.070	0.083	-1.126		-0.005	0.083	-0.077	
Authority	0.019	0.104	0.309		0.017	0.105	0.274	
Social Anxiousness	0.236***	0.146	3.860		0.219***	0.147	3.507	
Expressive Control	0.321***	0.154	5.176		0.344***	0.163	5.168	
Privacy Control	-0.036	0.155	-0.578		-0.030	0.163	-0.441	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

The delta R squared values denote the change in variance explained by the addition of the variables in a block. In all instances except for the Block 2 values, these values should be interpreted the same as normal R squared values.

Research question one asked if the predictive effects of the information control variables would remain after controlling for social anxiousness. To reduce Type I error, research questions 1 and 3 were tested together. The results for both of these tests will be reported below.

Research question 2 asked how different power relations between an individual and an interaction partner would affect preference for different communication channels in face-threatening situations. To assess this research question, multiple linear regression analyses were conducted with the two power relation components, authority and referent, entered as predictors and preference for a channel entered as the dependent variable. Separate models were analyzed for each channel. Collectively, the power dimensions did not have a great deal of effect on channel preference. Although the regression model for FTF preference was statistically significant $F(2,232) = 4.683, p < .01$, the models for telephone, $F(2,232) = 1.935, p = 0.147$, IM, $F(2,231) = 1.167, p = 0.313$, and e-mail $F(2,229) = 0.019, p = 0.918$ were not. Within the FTF model, the referent power dimension positively predicted preference for FTF. More specific details regarding each of these regression models are reported in Table 3 in the sections labeled with "Power Dimensions (RQ2)" heading.

Research questions 1 and 3 asked if the predictive effect of the information control dimensions would remain after controlling for social anxiousness (RQ1) and the power relations between the respondent and her/his interaction partner (RQ3) respectively. These research questions were answered for each channel using hierarchical linear regression analyses. For each medium, channel preference was entered as the dependent variable. The variables for social anxiousness and the power dimensions, referent and authority, were entered as block 1 predictors; and the information control dimensions, expressive and privacy, were entered as block 2 predictors. Both research questions were assessed by the changes in variance explained for channel preference by the addition of the block 2 predictors. The results indicated that the predictive effects of the information control dimensions on channel preference remained for FTF, $\Delta F(2,228) = 6.812, p < .001$, telephone, $\Delta F(2,228) = 12.998, p < .001$, IM, $\Delta F(2,228) = 14.542, p < .001$, and e-mail, $\Delta F(2,228) = 13.511, p < .001$, after controlling for social anxiety and the power relations. As was found in the analyses of hypothesis 2, only the positive slopes of the expressive information control predictors were significant in each model. More specific details regarding each of these regression models are reported in Table 3 in the sections labeled with "Block 2 (RQ1 & RQ 3)."

Discussion

The positive presentation of self and the maintenance of one's face is an important concern in virtually every communication encounter whether handled in person or over some mediated channel. Individuals must manage the tension between needs for expression and needs for privacy in some way. Encounters inevitably occur where this management becomes more difficult and the potential for imposition and/or embarrassment for one's self or communication partner(s) rises (Goffman, 1967; Brown & Levinson, 1987). One's ability for control over the interaction and the flow

of information through verbal and nonverbal means is imperative to navigate these situations successfully. O'Sullivan (2000) observed that individuals prefer and select channels that afford them with greater degrees of this control.

Although O'Sullivan's (2000) arguments were innovative for computer-mediated communication research, his impression management model of communication channels focused almost exclusively on the built in features of the channels. He acknowledged the importance of social skills in developing his model; however, his empirical analyses did not account for them. The present paper extended his model through the introduction of a scale to measure individuals' afforded information control from the use of different communication channels. Although channel features have inarguable effects on the dynamic of an interaction, it is ultimately the abilities of individuals to utilize those that features (i.e. the intersection between features and abilities) that determine outcomes and channel preference. Just as with face-to-face conversation, individuals differ greatly in their information control abilities with any one channel. Thus, the information control scale focuses on the capacity of individuals to perform actions necessary for information control that emerges through the *intersection* of channel features and their communication skills.

The results of the empirical analyses of this paper largely supported the case for the information control scale to make a significant contribution to O'Sullivan's (2000) model. Interestingly, the face-threatening situations alone were not enough to have an effect on preference as O'Sullivan predicted: The respondents reported greater preference for FTF than any of the other channels. This finding was consistent with the more traditional approaches to mediated interpersonal communication discussed above which argue that richer channels such as FTF conversation should be preferred in complex situations (Daft & Lengel, 1984, 1986; Rice, 1993; Short et al., 1976; Sproull & Keisler, 1986). It may, however, additionally highlight the importance of focusing on the intersection between features and users as opposed to focusing on features alone as was done by O'Sullivan (2000). In support of the latter conclusion, afforded information control had the predicted positive effect on channel preference.

Confirmatory results in support of the efficacy of the information control scale were found for both the traditional and computer-mediated channels. Social anxiousness and power relations between an individual and an interaction partner were potential competing explanations for channel preference in face-threatening situations. Referent power of an interaction partner positively predicted FTF preference and social anxiousness was a significant predictor of preference for three of the channels under analysis in the hypothesized directions. However, the predictive power of the information control scale remained after controlling for both of these factors. Additionally for each channel, social anxiousness was no longer a significant predictor when the information control variables were added. Perhaps, where O'Sullivan's (2000) model focuses too greatly on channel features, social anxiousness as a predictor of preference overemphasizes the role of individual differences. By emphasizing the intersection between the channel and the individual, the information control scale explained channel preference with greater depth than either alone.

The overall lack of significant results for the power dimensions between the respondents and their interaction partners was surprising. Given Brown and Levinson's (1987) arguments that such power dimensions determine the impact of face threats and should directly impact behavioral decisions to manage them, it would be expected that they would affect channel preference. It is intuitive that referent power would positively predict FTF preference. Greater valuing for a relationship should lead a person to be willing to face their counterpart in person in order to maintain their relationship. Interactions between these power dimensions and information control as well as social anxiousness were analyzed, but no significant effects emerged and were left out due to space concerns.

Looking more closely at Brown and Levinson's (1987) use of power, their model most strongly references authority forms of power as determinant of face-management (politeness) strategies. Specifically, they specified social distance, relative power, and absolute ranking as conceptual indicators of power. French and Raven's (1960) dimensions were used because they accounted for this authoritative form of power as well as others that provided a more complete picture of the power relations that may exist between two individuals. Although authority forms of power were assessed, the sample may not have allowed for a representative test of its effect. As noted in the results, the authority power ($M = 5.21$, $SD = 1.78$) was relatively balanced and the referent authority ($M = 7.54$, $SD = 2.22$) was relatively high for the sample. The authority power relations Future studies should assess situations where power differences are normative such as educational or corporate settings or utilize experimental methods to manipulate the power relations for respondents. In addition to power relations, the effect of other contextual factors such as the history between those in an interaction or the goals operating in the interaction should be considered in future studies.

Future Research and Conclusion

Although this initial test of the information control scale was informative, there remain a number of questions and concerns that should be addressed in future research aside from those noted above. The first two concerns are methodological. First, the items within the information control scale pertaining to privacy information control may need to be reconsidered or expanded. Although the expressive dimension was successful in predicting preference for all four channels, the privacy dimension was not a significant predictor in any of the analyses. Although the items were based on established theory (Burgoon, 1982), some qualitative methods may be necessary in future studies to expand the items measuring the dimension. Second, although the key dependent variable in this study, media preference, pertains to a construct that is oriented toward a time-frame *prior* to media use, the design of this study asked that individuals consider their preference for using a medium *after* the communication episode. The relative success or failure that resulted in the recalled communication situations may have skewed the reported preference for the channels. Future research will need to overcome this success/failure bias.

A third concern related to the second was that media preference was considered and not actual outcomes. Technically, information control, as an emergent media affordance within interactions, should more directly relate to desirable outcomes (factor resulting from interaction) than it should preference (factor prior to an interaction). Much of our everyday interpersonal media use is based off of routines or simply what is commonly done. Considering perspectives such as social cognitive theory (Bandura, 1986), personal scripts (Schank & Abelson, 1977), or “canned plans” (Berger, 1997), patterns of success should emerge as a result of afforded information control that would lead to such routines. The connection between affordances and preference may be mediated by such success. The small effect sizes found in this study are potentially indicative of this. To address this concern, future studies should assess the relationships among media afforded information control, patterns of success, and patterns of actual channel selection.

Aside from future research directed toward addressing the limitations noted above, there are numerous opportunities to investigate previously observed issues in computer-mediated communication research in greater depth. For example, in observing the hyperpersonal effect of CMC on relationship development, Walther (1996) noted that relationships may potentially develop more quickly due to idealistic self descriptions and idealistic perceptions of others. Like O’Sullivan (2000), Walther highlighted the importance of the lean features of text-based CMC in allowing this effect to occur. As with handling face-threatening situations, features may have an important effect, but the effect may be amplified or attenuated by one’s afforded information control to selectively self present one’s self and interpret one’s partner. Other alternative points of investigation for information control in mediated environments include online dating (e.g., Whitty, 2008), deliberation (e.g., Min, 2007), and disinhibited behavior/flaming (Lea & Spears, 1992) among others.

The results of this initial examination of the information control affordance scale are promising. By emphasizing the intersection between the user and the medium, a clearer picture of self presentation through different interpersonal media emerges. In everyday communication, individuals face varying degrees of face-threats that can undermine their desired self presentational goals, and subsequently, undermine their relational and instrumental goals. The information control media affordance construct and scale are a beginning to a better understanding of how people are helped or hindered in their communicative efforts through media use. As noted above, future studies will need to be done to determine the full utility of the construct and its scale. With these future investigations, the information control media affordance offers the opportunity for a greater understanding of the process of mediated interpersonal communication in everyday life.

Notes

- 1 O’Sullivan (2000) measured preference for channels on continua ranging from FTF to some other channel. He did this based on the logic that a channel must be preferred over

some option and FTF was the most reasonable default. Due to recent arguments against the FTF default assumption (e.g. Sundar, 2009), this style of measurement was deemed inappropriate.

- 2 It should be noted for clarification that this series of tests assessed whether the different situations affected preference *within* channels (e.g., telephone preference in positive-self face-threats versus telephone preference negative-self face-threats). These did not test differences *between* channels as predicted by hypothesis one.

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Appendix

Information Control Scale

For each of the following actions, please indicate how much you agree or disagree that you can perform these actions when using each of the listed communication channels. Please do not provide responses for media channels that you do not use. (7-point Likert scales ranging from Strongly Disagree to Strongly Agree).

1. When making mistakes during interactions, I can generally recover from them. [Recover]
2. I feel that I can present myself well in interactions. [Present]
3. When things don't go the way I intend in an interaction, I feel that I am able to adapt as needed. [Adapt]
4. I can always say what I need to say in interactions. [Needed]
5. I can generally detect changes that occur in interactions. [Detect]
6. I feel that I am able to plan the way interactions will proceed. [Plan]
7. Interactions often don't go the way I intend them to go. [Unintended]*

8. When I need to do so, I can execute necessary communication strategies. [Execute]
9. I am able to communicate in ways that I feel are appropriate to the situation. [Appropriate]
10. I can sense my communication partners' feelings and changes in feelings. [Empathy]
11. I often misunderstand my communication partner. [Misunderstand]*
12. I have the ability to regulate the flow of communication between my communication partner and myself. [Flow]
13. I have the ability to control the pace of an interaction if I need to do so. [Pace]
14. If an interaction gets heated or overly emotional, I can generally calm the conversation down. [Calm]
15. I can avoid topics that I don't want to discuss. [Avoid]
16. I can easily end an interaction if I need to do so. [Terminate]
17. I can generally hide emotions from my communication partners when I need to do so. [Hide Emotion]
18. I can ignore things about an interaction if I need to do so. [Ignore]

*Items were reverse coded.