THE EFFECTS OF STABLE AND MALLEABLE EXPECTANCIES, COMMUNICATION CHANNEL, AND SELF-EFFICACY ON CONVERSATION BEHAVIOR AND INTERPERSONAL PERCEPTION

By

Stephanie Tom Tong

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ABSTRACT

THE EFFECTS OF STABLE AND MALLEABLE EXPECTANCIES, COMMUNICATION CHANNEL, AND SELF-EFFICACY ON CONVERSATION BEHAVIOR AND INTERPERSONAL PERCEPTION

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Although the effects of interpersonal expectations on conversation behavior and interpersonal perception have been widely researched, much of this work has focused on how expectancies affect behavior and perception in audio/voice or face-to-face communication. The current research tested 100 mixed-sex dyads to compare behavioral and perceptual effects of expectancies across two different types of mediated communication channels: computer-mediated communication (CMC) and audio/voice communication. In addition, this research examined the role of participants' self-efficacy to see if it affected expectancy outcomes. Variations in expectancy malleability, communication channel, and communication self-efficacy were found to impact behavioral and perceptual effects in dyadic interaction. The results are discussed in light of existing theories of CMC and the expectancy effects paradigm.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Introduction

A heavily researched and well-known area of study in social psychology and communication is the interpersonal expectancy effects paradigm. First made popular by Snyder, Tanke, and Berschied's (1977) landmark finding, the "behavioral confirmation bias," this phenomenon describes how an expector's first impressions of a conversational partner (the target) affect the target's subsequent interaction style. In the original study, a male "expector" was told that he would be interacting with a female "target" and received an attractive or unattractive photo that supposedly represented his partner. After their initial impression was formed, the expector used a telephone to talk to his partner who was located in another room. When conversations were analyzed, male expectors behaved in such a way that female targets reciprocated and confirmed pre-interaction expectations of attractiveness or unattractiveness as reflected in a variety of personality characteristics. Is this the phenomenon that leads to surprisingly intimate online relationships? Is this why flirtations that begin in online dating websites lead to disappointing face-to-face (FtF) encounters? If so, it is not the partner's lies, exaggerated self-presentations, or misrepresentations, but the expectors' instigation of inflated expectations that are to blame.

Behavioral confirmation describes the process in which expectors' initial impressions of targets come to affect their own behaviors and the subsequent behaviors of their interaction partners. The behavioral confirmation process is a well-documented outcome of pre-interaction expectancies, but others (Bond, 1972; Ickes, Patterson, Rajecki, & Tanford, 1982; Swann & Snyder, 1980) have found that expectancies do not always result in confirmation. Under certain conditions, expectors and targets may disconfirm initial impressions. Behavioral *disconfirmation* occurs when expectors possess negative first impressions of their partners, but are motivated to

coax the best out of their partner's behavior. By compensating for their partner's (ostensible) negativity, expectors trigger overly positive communication in targets, resulting in behavioral disconfirmation of negative expectations.

A second set of expectancy effects, known as perceptual effects, investigates expectors' interpersonal evaluations of targets after the discussion is finished. In some cases, a perceptual confirmation effect is found in which expectors' negative pre-interaction expectancies persist throughout the conversation, and manifest in their negative post-interaction judgments of targets. In other cases, perceptual disconfirmation occurs as expectors' post-discussion judgments change as a result of the positive conversation behaviors and move away from negative pre-interaction expectations. However, because it is less researched than confirmation, the causal and mediating processes of behavioral and perceptual disconfirmation are not as well known (see for notable exceptions, Berscheid, Boye, & Darley, 1968; Bond, 1972; Burgoon & Le Poire, 1993; Burgoon, Le Poire, & Rosenthal, 1995; Ickes et al., 1982; Swann & Snyder, 1980; Tyler & Sears, 1977).

Empirical tests of both confirmation and disconfirmation phenomena usually occur within zero-history, unacquainted dyads. Positive and negative pre-interaction expectancies often manipulate the target's personality traits (Berscheid et al., 1968; Ickes et al., 1982) or communication style (Burgoon & LePoire, 1993; Levine et al., 1999; Tyler & Sears, 1977). The sex of perceivers and targets is also manipulated with some experiments using same-sex or mixed-sex dyads. Interaction goals and motivations of perceivers and targets are often described as "getting to know you" situations where the expector is asked to form an impression of the target. Some experimental tests involve no communication (e.g., Tyler & Sears, 1977), while others include anticipated interaction (Berscheid et al., 1968; Darley & Berscheid, 1967), or

actual interaction with a confederate (Burgoon & LePoire, 1993; Levine et al., 2000) or naïve target (Ickes et al., 1982).

Previous research investigating expectancy effects has produced conflicting results. For example, although Tong (2011) used computer-mediated communication (CMC) and Ickes et al. (1982) used audio/voice based communication, both employed similar experimental procedures with zero-history dyads. Both experiments reported similar behavioral disconfirmation results, but contradicted each other with regard to perceptual effects. That is, both studies found male expectors' communication to be positive during the discussion, even when given negative expectations about their female target partners. However, expectors' post-discussion evaluations of targets were different in each study. Ickes et al. (1982) found perceptual confirmation; male expectors rated their partners as being negative, even though expectors and targets behaved positively during the discussion. In contrast, Tong (2011) found a perceptual disconfirmation effect where male expectors' interpersonal perceptions of targets moved away from initial negative expectancies at the end of the CMC chat.

Why might behavioral and perceptual outcomes vary as a result of different communication media? Could certain features of CMC affect causal processes and outcomes seen in previous research that used mediated audio/voice communication systems? The resolution of these conflicting results offers the potential to define theoretical boundaries due to medium, that is, to ascertain that CMC offers a different dynamic than vocal communication. By drawing on previous research from the expectancy effects paradigm and CMC theory, the current research examines how different forms of mediated technology may impact the role of interpersonal expectations on conversational behavior, communication and interpersonal perception.

The Process of Confirmation and Disconfirmation

As identified in previous research (e.g., Snyder et al., 1977; Ickes et al., 1982), the process underlying behavioral confirmation is initiated and enacted first by the expector and then reciprocated by the target. In the first step of this process, expectors form expectations about targets based on experimental information they receive from the experimenter. Expectors then base their interaction behavior on these expectations. Targets reciprocate these behavioral overtures, thereby confirming (or disconfirming) the expectors' initial expectations.

In confirmation processes, the expector receives information that causes him to form positive expectations about his partner, making him more likely to produce positive communication behaviors during their interaction. When his positive communication behaviors are reciprocated by the target, the expector believes that his positive, pre-interaction expectations are confirmed by the target's behavior. Conversely in the disconfirmation process, the expector receives information that causes negative target expectations. Although he expects that the target will be unpleasant, or unattractive in some way, he must also believe that he can modify or change the target's negative nature through his own behavioral influence. If the expector views the target negatively (e.g., "My partner is unpleasant and anti-social") and believes that he can somehow correct or compensate for her demeanor through his own interaction behavior ("I'll be extra outgoing to draw my partner out"), then he will behave positively toward her. If he believes that she reciprocates his behavior, then the disconfirmation process is completed. However, if the expector views the target as unpleasant, but feels incapable or unmotivated to modify her anticipated negativity, confirmation (rather than disconfirmation) will occur.

In summary, confirmation occurs when expectors anticipate a positive interaction with a pleasant partner and behaviors of both members of the dyad are positive and consistent with

initial expectations. Disconfirmation is implemented when (1) expectors view targets as undesirable, but (2) also believe that targets' behavior can be modified via mutual interaction and (3) are willing and able to perform contrasting behaviors that (when reflected by the target) can facilitate positive interaction (Ickes et al., 1982). If these conditions are met, disconfirmation strategies will be initiated by the expector and reciprocated by the target.

Prior research has shown that when expectors base their interaction behaviors on pre-discussion expectancies of their partners, two types of outcomes, *behavioral* and *perceptual*, can occur. An important distinction is that while behavioral effects refer to expectors' actions displayed during the discussion, perceptual effects refer to expectors' attitudes towards their partners. Behavioral confirmation occurs when expectors' actions during the conversation reflect their initial expectations (i.e., "My partner is very kind, I'll treat her very kindly); behavioral disconfirmation occurs when expectors receive negative pre-interaction expectations about their partners, but are motivated to display positive behaviors during the conversation.

Many have conceptualized the expectancy effects process as goal-oriented communication (Snyder, 1992) in which the expector's goal is to achieve the most pleasant, positive interaction with his partner as possible. Burgoon et al. (1995) suggest that even though expectors anticipate conversing with an unknown, negative discussion partner, they are motivated to behave positively in an effort "to achieve a fairly pleasant, involving conversation in interactions with strangers" (p. 314). In other words, expectors will be motivated to achieve conversational politeness by minimizing face threats, awkwardness, or conflict.

Behavioral & Perceptual Outcomes

To measure and evaluate behavioral effects, most studies employ third-party raters to judge the positivity and negativity of the interaction behaviors of expectors and targets (Burgoon

& LePoire, 1993; Ickes et al., 1982; Snyder et al., 1977; Tong, 2011). Results often show that expectors attempt to alter own their communication behavior in reaction to their pre-interaction expectations and impressions of their partner (Snyder & Stukas, 1999).

Perceptual effects are analyzed using the expectors' post-discussion evaluations of targets to see if experimentally induced expectations and discussion behaviors affect the ways in which expectors come to judge their partners. Perceptual confirmation of expectations occurs when expectors' pre- and post-discussion attitudes about their partners remain consistent through the discussion and exhibit no change. That is, targets are described in experimental inductions as negative prior to the conversation and expectors believe that targets are still negative at the end of the conversation. Conversely, perceptual disconfirmation of expectations occurs when expectors' form negative attitudes about the target based on their initial experimentally-induced impressions. As the conversation unfolds, expectors may develop positive attitude change toward targets, creating the perceptual shift seen in expectors' positive post-discussion ratings of targets.

Communication channel: Audio/voice & CMC. Interestingly, previous work (Ickes et al., 1982) has found that behavioral disconfirmation can occur in the absence of perceptual disconfirmation. That is, when expectors' pre-interaction expectations of their partners are negative, expectors' perceptions often remain negative, even if the behavior exhibited during the discussion was positive. Ickes et al.'s experimental design included three conditions in which male expectors were given specific expectations about their partner's friendliness: a positive/friendly expectancy, a negative/unfriendly expectancy, and a no-expectancy control condition. At the end of the discussion, expectors were asked to rate their partners on items of interpersonal attraction. Ickes et al. (1982) found perceptual confirmation of expectancies such that at the end of the discussion, expectors' ratings of targets were significantly higher in the

friendly-expectancy condition than in the no-expectancy control condition. However, expectors' ratings of targets in the unfriendly-expectancy condition did not differ from those in the no-expectancy control condition despite their own and their partners' positive behaviors. This suggests that initial expectations of unfriendliness persisted even though the targets were positive communicators. Ickes et al. explained that the lack of perceptual change in the face disconfirming behavior was due to the fact that "compensating expectors may not only become aroused prior to an anticipated 'unpleasant' interaction, but may also be aware of and yet mistrust their partners' apparently 'disconfirming' behavior during the interaction" (p. 186).

Tong (2011) examined dyads that used computer-mediated chat, a different communication medium than that employed in previous research, and found that behavioral and perceptual *dis*confirmation (in which expectors behaved positively during the interaction and rated their partners positively after the interaction indicating disconfirmation of initial expectations) can occur in conjunction with each other. Tong (2011) applied the hyperpersonal model of CMC to explain how behavioral and perceptual disconfirmation may be more likely to occur in CMC than in previous studies using audio/voice channels.

The hyperpersonal model is composed of four concurrent elements—sender, receiver, channel, and feedback—and suggests that each is affected by certain properties of CMC which allow it to support relational development and impression formation online (Walther, 2007). First, senders may selectively self-present by disclosing certain attributes or personality characteristics that can enhance their self-image and the overall quality of the interaction. Since the first step in the disconfirmation process depends on the expector's initial overtures, the ability to selectively self-present may increase the expector's ability to display positive behaviors in line with both confirmation and disconfirmation processes. Secondly, the model states that

receivers may place great importance on small, textual message cues and exaggerate attributions of similarity, intimacy, and desirability, increasing liking and attraction (Walther, 2007). If targets interpret expector's behavior in an overly positive or idealized fashion, this could lead to even greater levels attraction than those reported among dyads in FtF or audio/voice settings. An example of increased receiver intimacy attribution occurred in a study conducted by Jiang, Bazarova, and Hancock (2009) which tested the effects of greater and lesser rates of self-disclosures among a participant and a confederate conversing in either CMC or FtF settings. They found that participants who received greater levels of self-disclosures from their confederate-partners in CMC reported higher levels of relational intimacy than those receiving the same amount of disclosures in FtF interaction. Third, the CMC channel gives communicators greater control over the interaction. By reallocating the cognitive resources that are used in FtF settings to monitor physical self-presentation cues (such as appearance) and other environmental distractions, CMC's editing capabilities and added discretion provide increased control over message construction. Such added affordances make it easier for expectors to compose messages that influence targets, and also give targets the ability to reciprocate expectors' behaviors, perhaps elevating expectancy effects to "hyperpersonal" levels.

Lastly, the hyperpersonal model was originally conceptualized with a fourth component, feedback, which suggested that selective self-presentation, idealized impressions, and channel affordances could work together to create a "feedback loop" that could support behavioral confirmation. However, conceptually, it seems the feedback loop could also lead to behavioral and perceptual disconfirmation as well: If expectors enact disconfirmation tactics and targets reciprocate expectors' overtures, then feedback processes may result in the exchange of behaviors that are inconsistent with expectancies. Although two CMC studies (Walther, 2007;

Walther, DeAndrea, & Tong, 2011) have produced results which suggest the possibility of behavioral confirmation and disconfirmation effects in CMC, the effects of expectations were only identified as post hoc explanations—but remained empirically unverified.

Expectancy type: Perceived stability versus malleability. As mentioned above, one important difference between Ickes et al. (1982) and Tong (2011) was communication medium. Another important variable that was implicitly tested in Ickes et al. (1982) and explicitly induced in Tong (2011) was the *perceived stability or malleability of the target's behavior*. If an expector perceives that his partner's behavior is attributable to a stable, non-changing personality trait, he is more likely to enact behaviors that confirm his initial expectations. However, if the information suggests that the target's behavior is caused by something malleable (e.g., a fleeting negative mood or mood), then expectors will select disconfirmation tactics.

Differences between pre-interaction expectations of a partner's trait and state were systematically varied and tested in Tong (2011) to identify this causal mechanism underlying perceivers' selection of confirmation versus disconfirmation tactics. Male expectors and female targets were recruited to the laboratory and told they would be engaging in a "getting acquainted" conversation through online instant messaging (IM). Unbeknownst to the naïve targets, expectors were given experimental inductions that depicted the targets according to one of four expectancy conditions. These experimental conditions reflected a 2 (stable/malleable demeanor) x 2 (positive/negative demeanor) fully crossed design resulting in the following target demeanor expectancies: (1) positive stable personality, (2) negative stable personality, (3) positive malleable mood, and (4) negative malleable mood. After chatting for 40 minutes via CMC, expectors rated their partners on dimensions of social attractiveness, sociability, and extraversion. These ratings were used to assess how expectors evaluated the targets after the

CMC chat. In addition, three outside judges (blind to hypotheses and treatments) viewed transcripts of each conversation and rated expectors and targets on the same dimensions of social attractiveness, sociability, and extraversion.

Among the findings were significant behavioral and perceptual confirmation effects in the positive stable personality and positive mood conditions. In these conditions, expectors' behavior was consistent with initial pre-interaction expectations of targets. Additionally, naïve targets responded to expectors' behaviors by reflecting back positive behaviors of their own, completing the behavioral confirmation process for both expectors and targets. Furthermore, in these conditions expectors' post-chat ratings of targets were consistent with their pre-chat expectancies, confirming that no perceptual shift had occurred as a result of the communication displayed during the chat. Similarly, in the negative stable personality condition, both behavioral and perceptual confirmation effects were found. Because expectors believed that the source of their partners' negativity was due to a stable source (personality), they were unmotivated to produce positive chat behaviors. Instead, expectors displayed negative behaviors toward targets. Naïve targets reciprocated with negative chat behaviors of their own. Thus at the end of the discussion, expectors' negative post-chat ratings of targets revealed the confirmation of the negative pre-interaction expectancy.

However, a different outcome occurred in the negative, malleable mood condition. In this condition, expectors and targets showed behavioral disconfirmation. Expectors, anticipating their partners' negative, but malleable mood, actually compensated for it by behaving positively, thereby displaying behaviors that were inconsistent with pre-chat expectancies. Targets responded to expectors' behavioral overtures favorably, with positive behaviors of their own. Furthermore, expectors displayed perceptual disconfirmation effects. When expectors' post-chat

ratings of targets were examined, expectors actually came to experience a departure from their initial negative expectations, rating targets as more socially attractive, sociable, and extraverted at the end of the online chat.

Past versus Present Research

To review, both Ickes et al. (1982) and Tong (2011) examined the propensity for an individual (expector) who anticipates interaction with an unpleasant partner (target) to try to get the target to behave pleasantly. The original, behavioral disconfirmation framework by Ickes et al. specifies that the expector, despite his facilitative and pleasant behavior toward the target, persists in his negative evaluation of the target. That is, he perceives the target's positive behavior is due to his own influence, and he remains negatively-disposed about the target when all is said and done. This pattern has been supported in Ickes et al.'s previous research which used a voice-based, audio communication system.

In contrast, hyperpersonal CMC research has suggested that in CMC, expectors may not only affect targets' behaviors but targets may also influence expectors' attitudes, as evidenced by expectors' positive post-interaction evaluations of the target (Tong, 2011; Walther, 2007; Walther et al., 2011). Such perceptual differences are due in part to certain components of the CMC medium (e.g., selective self presentation, receiver idealization, control over message production, and mutual feedback) that work together to facilitate behavioral and perceptual disconfirmation. This is the pattern that was revealed in Tong's (2011) study, which was conducted via CMC.

The conflict between Ickes et al.'s and Tong's research focuses on the experimental condition where expectors receive interpersonal expectancy manipulations that induce expectations that are negatively valenced and malleable. Expectors in Ickes et al.'s study were

told target partners were either "friendly/not friendly" and expectors in Tong's experiment received a more general expectation of their partner's "positive/negative mood." Both expectancy manipulations were conceptualized and anticipated to be perceived by male participants as negatively valenced and malleable. Although only Tong (2011) incorporated a direct manipulation check on perceptions of the malleable nature of the expectancy induction, Ickes et al. identified the potential malleability of their friendly/unfriendly induction as a post-hoc explanation for their findings.

The two studies, while similar, have notable differences. First, communication medium: In Ickes et al. conversations took place via an audio/voice communication system, similar to a telephone, whereas Tong used an online synchronous chat system. Almost all previous research (e.g., Burgoon & LePoire, 1993; Burgoon et al., 1995; Ickes et al., 1982; Snyder et al., 1977) has stressed the importance of vocal communication in the transmission of expectancies. Primarily, these researchers assert that the nonverbal cues conveyed by vocal communication allow for the transmission of expectancies necessary for the process of behavioral and perceptual effects. The current study compares CMC and audio/voice channels to see if lack of vocal and auditory information impacts behavioral and perceptual outcomes. Varying the communication medium tests the possibility that expectancy effects function differently in the reduced cue environment of CMC versus audio/voice. Such a difference would have a notable impact on existing theories of CMC (e.g., the hyperpersonal model) and the expectancy effects paradigm, more generally.

Secondly, the expectancy manipulation: Although both studies induced expectancies that were negative and malleable, the two were somewhat different. Ickes et al. used "friendly/unfriendly" expectation; Tong used a "negative/positive mood" expectation. This

difference in the experimental induction is held constant in the current research in order to detect differences due to media.

The Effects of Self-Efficacy and Technology

The previous findings in Tong (2011) confirmed that CMC is capable of supporting behavioral and perceptual effects. In addition, these results have prompted additional questions about CMC's impact on the process of expectancy effects: If this effect is indeed attributable to differences between audio/voice and CMC channels, what is it about the CMC medium that causes these differences in interpersonal perceptions?

According to previous work, the process of expectancy effects begins with the expectors' behavioral overtures which are based on initial expectations. In cases when the expectancy triggers disconfirmation processes (i.e., the expector believes his partner is negative, but also open to influence), the expector must produce positive communication behaviors to achieve his goal of fluid, pleasant interaction. Some (Ickes et al., 1982) have implied that an important causal condition underlying the expector's selection of disconfirmation tactics is that experimentally-induced expectancies must reflect that the source of target's negative demeanor has the potential to change (i.e., is malleable rather than stable). However, the current research proposes that an equally important condition for disconfirmation processes is the expector's belief *in his own ability to influence or change the target's negativity*. The more efficacious an expector feels in his ability to construct and craft positive communication messages to combat his partner's negativity, the more likely behavioral disconfirmation is to occur. Thus an important variable that has never been assessed in the expectancy effects paradigm the expector's belief in his own self-efficacy to influence the target.

The Role of Self-Efficacy

Because self-efficacy is an important determinant of behavior, it is relevant to the discussion of expectancy effects. People determine their course of action based on beliefs of their own personal self-efficacy: "Perceived self-efficacy refers to the belief in one's capabilities to organize and execute the courses of actions required to produce given attainments" (Bandura, 1997, p. 3). As Bandura suggests, self-efficacy represents "propositional beliefs" that an individual can, through his or her own actions, achieve certain results. On the other hand, if people believe that their actions cannot produce results, they will not act. It is this belief in predicted outcomes that makes self-efficacy a potentially important variable in the current research. For instance, if a target has a negative stable personality, the expector may believe that the target is not persuadable. He then feels little self-efficacy or personal ability to change the behavior of his partner or the course of the conversation since the source of the target's behavior is stable and resistant to influence. However, expectancies of a negative, malleable mood may give rise to greater feelings of partner influence self-efficacy. In this case, the expector believes that his actions can lead to a change in the target's negative mood since the source of the target's anticipated behavior is subject to influence. Therefore, expectors' belief in their self-efficacy regarding their ability to change targets' demeanor may influence their own behavior in different ways when faced with either stable or malleable expectations.

Self-efficacy in CMC. Self-efficacy has been an important factor in much CMC research. LaRose and colleagues' approach to Internet use (LaRose, Lin, & Eastin, 2003; LaRose, Mastro, & Eastin, 2002) has reinterpreted Bandura's social cognitive theory into a model of media use, showing that individuals' expectations regarding the outcomes of their media use, their ability to regulate their own behavior, and their belief in personal self-efficacy, all affect how they use and consume media. Other theorists have suggested that the features of CMC provide greater

communicative control, which allow individuals with poor offline social skills to take advantage of online media. Caplan's (2003, 2005) deficient social skill model of problematic Internet use suggests that individuals who feel they lack certain communication and social skills in their offline interactions turn to CMC because of the communicative advantages that the medium provides. Following the hyperpersonal model of CMC, Caplan (2005) points out that individuals interacting via CMC may be able exploit certain features that the medium provides, improving control over self-presentation and message production when compared to those using audio/voice channels. These increased advantages may be reflected in the achievement of the communication goals associated with the confirmation and disconfirmation processes.

The hyperpersonal model outlines certain advantages that CMC provides over audio/voice channels that may increase an expector's belief in his own self-efficacy. Since CMC allows communicators the ability to (1) reallocate cognitive resources toward message construction, (2) edit and delete words before they send messages out to others, and (3) process messages more fully before needing to commit to a response (Walther, 2007), expectors may experience increased self-efficacy with regard to the achievement of communication goals, which may affect their behavior and attitudes toward their partners, and the communication encounter in general. The current study uses newly developed measures to assess the impact of self-efficacy on the process and outcomes of expectancy effects. If expectors believe that they are less effective in influencing others online than in multimodal communication, it could be one explanation for why perceptual disconfirmation effects were found in Tong's (2011) study but not Ickes et al.'s (1982) initial test in audio/voice.

However, it may be that communicators' perceived self-efficacy will function differently in each channel. A similar pattern of occurred in Walther and Bazarova's (2008) investigation of

the theory of electronic propinquity (TEP). The original conceptualization of TEP (Korzenny, 1978) suggested that several factors including media bandwidth, task complexity, feedback, and perceived channel choice (i.e., the perception that other communication channels are available to be used for communication tasks) can all mutually affect feelings of propinquity, or the psychological feeling of closeness that partners experience by using different forms of media. In their test, Walther and Bazarova (2008) varied communication channel bandwidth (low, medium, high), task complexity (low, moderate, high), perceived media choice (available, not available), and individuals' self-assessments of communication skills to see how these factors influenced propinquity. Their results showed that communication skills did play a role in the production of perceived closeness and satisfaction, but that the effect of skills interacted with other beliefs about media capacities and task complexity when participants compared those capacities. When communication skills were low and task complexity was low, perceptions of the availability of a higher bandwidth media created a decrease in feelings of propinquity. Interestingly, when communication skills were high, propinquity was achieved, regardless of media bandwidth or task complexity: "It appears that greater communication skills can overcome the onerous effects of relatively lower bandwidth as well as the deleterious effects of task difficulty on propinquity" (p. 637).

Thus the pattern seen in Walther and Bazarova (2008) provides rationale to expect that the interaction of self-efficacy with perceived stability/malleability expectancies and communication channel will have strong effects on behavioral and perceptual outcomes in the current research. If self-efficacy functions in a similar way as communication skill in Walther and Bazarova (2008), it is anticipated that expectors with high self-efficacy will be less affected by the negativity associated with both malleable mood and stable personality expectations in

both high and low bandwidth channels, but that expectors with low self-efficacy will be more affected by expectancy and channel variability.

Hypotheses

The current research addresses the cause of the conflicting findings of Ickes et al.'s initial test of behavioral disconfirmation and the more current findings associated with Tong (2011). In short, there are two potential casual factors that may explain the inconsistent findings. The first potential explanation may be the difference in the stability or malleability of the expectancy. Although this variable was directly manipulated and tested in Tong (2011) the dyads in that study communicated only in CMC, making it difficult to ascertain if the expectancy or medium caused the different results in each study. If the perceptual disconfirmation findings found in Tong (2011) can be replicated in the current test using the audio/voice channel, this will confirm that the differences were not due to medium, but rather the subtle differences between Ickes et al. (1982) and Tong (2011) in the design of the expectancy manipulation.

However, as outlined by the hyperpersonal model of CMC, a second explanation for the conflicting findings may be the effect that communication medium has on expectors' and targets' behaviors and expectors' post-chat evaluations of the target. A third, related issue is to uncover what specific factors or affordances of the CMC medium may be altering how expectors and targets communicate online, as compared to audio/voice.

The first set of hypotheses contains predictions about behavioral disconfirmation effects. To test these hypotheses, the comparison must be between (1) the condition under which behavioral and perceptual *disconfirmation* are anticipated: negatively valenced, *malleable mood* expectancies, and (2) the condition expected to produce behavioral and perceptual *confirmation* effects: negatively valenced, *stable personality* expectations. Importantly, these hypotheses

predict that the *behavioral* effects found in previous research can be replicated in both CMC and audio/voice conditions, but not necessarily the *perceptual* effects, i.e., even if targets behave pleasantly in response to expectors' pleasant behavior, expectors may discount targets' pleasantness as merely a reciprocation of the expectors' own pleasantness and not a real change the targets' demeanor. (These perceptual issues are examined later, in H3.) The first two hypotheses specify only behavioral effects, and predict the same behavioral effects in both CMC (H1) and audio/voice (H2).

> H1: In CMC, when Expectors have pre-interaction expectancies of Targets' negative *malleable* mood and are compared to Expectors who have pre-interaction expectancies of Targets' negative, *stable* personality traits, (a) Expectors perform positive discussion behaviors, and (b) Targets perform positive discussion behaviors.
>
> H2: In audio/voice, when Expectors have pre-interaction expectancies of Targets' negative *malleable* mood and are compared to Expectors who have pre-interaction expectancies of Targets' negative, *stable* personality traits, (a) Expectors perform positive discussion behaviors, and (b) Targets perform positive discussion behaviors.

The second set of hypotheses advances predictions about perceptual effects, specifically focusing on expectors' post-chat attitudes toward their partner. It is this crucial test that can determine if the communication channel accounts for perceptual differences between Ickes et al. and Tong's research. Thus, the critical comparison variable is not the expectancy, but rather the communication medium. In these predictions, the expectancy comparisons are held constant, but the channel is varied; the medium in which the dyads interact is predicted to impact how expectors evaluate their partners when the interaction is finished.

H3: When Expectors who hold pre-interaction expectancies of Targets' negative *malleable* mood interact with targets via audio/voice channels, Expectors exhibit more negative post-discussion judgments of Targets' demeanor than those Expectors interacting with targets via CMC.

In other words, voice expectors perceive targets' affective behavior to be merely a reflection of their own influence on the targets and not a result of any real change in the targets' underlying demeanor, whereas CMC expectors experience targets' affective responses to reflect an actual demeanor change.

Lastly, a series of hypotheses are proposed predicting the effects of expectors' self-efficacy on the confirmation and disconfirmation of expectancies. First, how does self-efficacy function for expectors?

H4: Differences in (a) channel and (b) stable versus malleable expectancies affect expectors' self-efficacy.

Second, how does expector self-efficacy interact with expectancy type and communication channel to impact behavioral and perceptual effects?

H5: Differences in expectors' level of (a) partner influence self-efficacy and (b) comfort with the communication medium moderate the effects of expectancy and channel on *expectors'* discussion behaviors.

H6: Differences in expectors' level of (a) partner influence self-efficacy and (b) comfort with the communication medium moderate the effects of expectancy and channel on *targets'* discussion behaviors.

H7: Differences in expectors' level of (a) partner influence self-efficacy and (b) comfort with the medium moderate the effects of expectancy and channel on expectors' post-discussion evaluations of targets.

Method

Participants

The sample of 160 individual participants (80 female, M_{age} = 20.03 years, age range: 18-29) were recruited from introductory communication and telecommunication classes. In the sample, 29% identified as freshmen, 16% as sophomores, 34% as juniors, and 19% as seniors. Participants were arranged in cross-sex dyads and randomly assigned to one of four experimental conditions. A separate sub-sample of 40 participants (20 female, M_{age} = 20.33 years, age range: 18-25) was recruited to form cross-sex dyads in an offset, no-expectancy control condition. Expectors in this control condition were compared to expectors in both stable personality and malleable mood conditions in an effort to replicate the analyses of perceptual effects reported in Ickes et al. (1982).

Procedure

Following previous research (e.g., Snyder & Haugen, 1994; Snyder et al., 1977) dyads consisted of male expector-female target pairs. To insure that male and female participants did not see each other prior to their conversation, they arrived to the laboratory in five minute staggered intervals, and reported to separate locations. Participants were then immediately escorted into small, private rooms, each of which contained a computer. Experimenters greeted the participants and told them that they would engage in a "getting acquainted" conversation with a partner of the opposite sex using either CMC or audio/voice communication technology.

After obtaining the participants' consent, experimenters made sure that each member of the dyad was not acquainted with the other: "Thank you for coming in today; we appreciate your participation. You are going to engage in a conversation with a partner whose name is [*expector/ target name*]." If participants indicated that they knew each other, the experiment was terminated. However, if participants were unacquainted, they continued with the experiment. Expectors completed information forms about themselves, viewed their partner's (bogus) personality or mood information, and completed pretest measures regarding their partner (described below). Female targets were naïve and received no information about their partners (other than names). Those interacting using CMC were instructed to sign in to Chatzy.com, a real-time messaging system, and chatted for up to 30 minutes. In the audio/voice condition, participants used a wireless microphone and headphone system to talk for 10 minutes. All discussions were recorded and later transcribed for coding. After the discussion was finished, both expectors and targets completed posttest items giving their opinions about their partner, the chat, and their self-efficacy with either verbal communication or CMC chat. They were then debriefed and thanked.

Experimental Design

The experimental design reflected a 2 (stability: personality/mood) x 2 (medium: CMC/audio-voice) to create the following cells: (1) negative personality/voice, (2) negative personality/CMC, (3) negative mood/voice, (4) negative mood/CMC. Cross-sex dyads were randomly assigned to conditions creating 20 dyads per experimental cell. Twenty offset dyads were randomly assigned to two no-expectancy control conditions: no-expectancy/CMC and no-expectancy/voice.

Expectancy Manipulations

Expectancies were manipulated using the same procedures and materials in Tong (2011). Expectors were given a bogus information sheet and were told that this sheet contained the targets' responses in which they evaluated their own personalities or moods. In reality, these responses were pre-generated to reflect experimental manipulations.

Stable personality trait. After being escorted to the lab room, male expectors randomly assigned to the negative stable personality trait conditions completed a brief scale with items designed to measure "stable personality traits." They were told that this information would be exchanged with their partners' "so that you each have a little background information about each other's personality before the chat." Expectors were asked to fill out this form to enhance the realism of the information exchange. In actuality, these completed forms were not exchanged with female participants. Male participants then received a bogus form with pre-generated responses designed to reflect experimental manipulations. Each information sheet depicted female targets' responses to the questionnaire as having "unpleasant" personality characteristics. Following Burgoon and LePoire (1993) and Ickes et al. (1982), experimenters delivered the following induction to male expectors when giving them the information sheet about the female target: "Well, this interaction could be kind of hard since your partner doesn't seem to be the most positive personality type I've ever seen. Well, good luck."

Malleable mood. To induce the negative mood expectancies, similar procedures to the stable trait manipulations were used. Experimenters asked male expectors to fill out a short questionnaire regarding their moods and informed them that their partners would be doing the same prior to the interaction. After completing this questionnaire, experimenters gave expectors the bogus results of their partners' mood questionnaire which was designed to instill the negative mood expectation. Along with the questionnaire scores, experimenters gave expectors the

following information about female targets: “Well, this interaction could be kind of hard since your partner doesn’t seem to be in the most positive mood I’ve ever seen. But that could change, since moods come and go. So, good luck.”

Measures

Hypotheses specified that expectors’ expectancies about the targets’ fleeting mood or enduring personality should (in specified cases) lead to different perceptions of the targets’ interpersonal desirability (e.g., positivity and negativity), and that both expectors’ and targets’ conversational behaviors should reflect these variations in desirability. The dependent measurement of desirability therefore needed to be amenable to reliable administration by both participants and by outside, third-party raters.

Previous research on behavioral confirmation has used a variety of measures but their usage and reliability are unclear. Snyder et al. (1977) used 21 items from the Impression Formation Questionnaire (Dion, Berscheid, & Walster, 1972) which measures “stereotype traits” such as sociability, poise, and outgoingness. Ickes et al. (1982) used 18 bipolar interpersonal attraction items (e.g., “cold—warm,” “exciting—dull,” “sincere—insincere”) from previous studies (Ickes & Barnes, 1978). The current research adopted three measures that have well-established reliability and have frequently been used in interpersonal and CMC research on impressions, enhancing the potential generalizability of the present efforts. The first dependent measure reflects one of McCroskey and McCain’s (1974) three factors of interpersonal attraction: items assessing the “social or liking dimension” (p. 262) of interpersonal attraction. The last two sets of items measured sociability and extraversion (McCroskey, Holdridge, & Toomb, 1974) and together, these three dimensions formed the composite dependent variable of interpersonal desirability. All items used a 7-point scale.

A confirmatory factor analysis was conducted on the dependent variables of social attractiveness, sociability, and extraversion to test the three factor model. Using procedures outlined by Hunter and Gerbing (1982), each factor was tested for internal consistency. Comparing predicted to obtained correlations revealed that social attractiveness, χ^2 (9, 160) = 13.91, p = .13, RMSE = .001, sociability, χ^2 (9, 160) = 12.42, p = .19, RMSE = .002, and extraversion, χ^2 (5, 160) = 0.44, p = .99, RMSE = .001, were all internally consistent. The small residual errors between predicted and obtained correlations, and the small size of global error suggested that the data were consistent with the three factor solution. All items and reliabilities can be found in Appendix A.

In addition, items were created to measure participants' perceived social influence self-efficacy and perceived self-efficacy with CMC and with oral (vocal) communication. As Bandura (2006) explains, the "one measure fits all" approach is problematic in that it results in items that are ambiguous in their measurement and application. Rather, perceived self-efficacy items must be context and domain specific if they are to provide any explanatory or predictive value: "Scales of perceived self- efficacy must be tailored to the particular domain of functioning that is the object of interest" (p.307-308). Therefore, the first scale contained six items designed to measure the dyadic influence processes involved in expectancy effects, or *partner influence self-efficacy* (hereafter PISE), which is defined as the participants' belief in their ability to influence their discussion partner via their own communication behaviors. The second set of five items assessed *media comfort*, or participants' proficiency and confidence in effectively communicating via the assigned technology (i.e., CMC chat or vocal communication). Lastly, *self-presentation efficacy* was measured with three items assessing individuals' ability to present

themselves successfully in audio/voice or CMC chat. The separation of self-efficacy into three dimensions was necessary to ensure that each construct was being measured and tested separately. All items used a 7-point response scale.

Because the self-presentation self-efficacy items exhibited poor reliability ($\alpha = .64$), the scale was dropped from current study. Confirmatory factor analyses were conducted on PISE and media comfort using the internal consistency theory (Hunter & Gerbing, 1982). Analysis of the PISE items revealed, χ^2 (14, 80) = 23.80, $p = .05$, RMSE = .05, with residual errors ranging from .00 to .08, with none large enough to question internal consistency. Media comfort was also internally consistent, χ^2 (9, 80) = 16.31, $p = .06$, RMSE = .04, with residual errors ranging from .00 to .07. Both scales were internally consistent and used in the subsequent hypothesis tests. Inter-item reliability and descriptive statistics for self-efficacy items be found in Appendix B.

Lastly participants responded to four open-ended items in the posttest questionnaire. The first two open-ended items asked participants to describe their own behavior and their partner's behavior during the discussion. The last two open-ended items asked specific questions including, "Did you think about your discussion behaviors before engaging in the conversation?" and "What if anything did you do to deliberately please or displease your partner? Did you employ any specific strategies to make sure the conversation was pleasant or unpleasant?"

Expectors. The pretest for male expectors included items measuring the malleability of the expectancy on a 7-point scale where 1 = *stability* and 7 = *malleability* ($\alpha = .84$). Items measuring the valence of the expectancy inductions (1 = *negative valence* and 7 = *positive valence*) were also included in the pre-test ($\alpha = .80$). Posttest items were the same items used in Tong (2011) along with the self-efficacy and open-ended items described above. Items on these scales were scored so that higher scores indicated greater ratings of positivity, perceived

malleability, social attractiveness, sociability, extraversion, PISE, media self-efficacy, and self-presentation self-efficacy respectively (see Appendices A & B).

Targets. Female targets also completed posttest measures and rated expectors on valence, social attractiveness, sociability, and extraversion. They also completed measures of their own self-efficacy regarding CMC and vocal communication. These data were not analyzed in the current research, and no further mention of them is made in this study.

Outside Ratings

Following previous behavioral confirmation research and Tong (2011), three outside judges, blind to hypotheses, viewed CMC transcript files and listened to audio recordings that contained the conversation behaviors of either the male expector or the female target, which allowed coders to rate only one half of each dyad at a time. Due to technological errors in the recording process, two of the voice files for male expectors were inaudible and therefore unable to be coded. This resulted in a total of 38 total male expectors in the voice condition and 40 female targets. All expector and target pairs were successfully recorded and coded in the CMC conditions. Judges' scores were assessed for reliability using Cronbach's *alpha*. Judges rated expectors and targets in random order on the same three dependent measures described above. For male expectors and female targets in the CMC condition, inter-rater and inter-item reliabilities were sufficient for all three dimensions. Ratings of expectors and targets in the voice condition also produced sufficient inter-rater and inter-item reliability coefficients (see Appendix C for all reliability coefficients and descriptive statistics).

All judges' individual item scores were summed and averaged to create a single composite score on each respective dimension of social attractiveness, sociability, and extraversion. After these composite scores were calculated, three index variables were created by

averaging across individual coders' dimension ratings creating a "grand index" score for each of the three dimensions for each expector and target in all dyads.

Results

To understand the effects of channel and expectancy manipulations on behavioral and perceptual confirmation and disconfirmation, the two general analyses involved (a) the male expectors' and female targets' behaviors during the interaction, as measured by the observer judges' ratings of the voice and CMC chat transcripts and (b) male expectors' post-discussion interpersonal evaluations of targets. In addition, the analyses examined the impact of expectors' PISE and media comfort as moderating factors.

Manipulation Checks

To ensure that expectors perceived negative personality and mood expectancy inductions as truly negative, a one-sample *t*-test was conducted. Results indicated that expectors in the both negative personality and mood conditions, $M = 3.21$, $SD = 0.62$, rated their partners to be significantly lower than the midpoint of the seven-point valence scale, $t\ (77) = -4.02$, $p = .001$, $\eta^2 = .17$. With regard to malleability manipulations, expectors in the mood condition anticipated the source of their partners' expectancy to be more malleable, $M = 4.38$, $SD = 0.72$, than those in the personality condition, $M = 3.71$, $SD = 0.87$, $t\ (76) = -3.68$, $p = .001$, $\eta^2 = .04$.

Hypothesis Tests

Hypothesis tests were conducted using the multivariate analysis of variance (MANOVA) procedure. Since the dependent variable of interpersonal desirability was measured using a combination of three dimensions of social attractiveness, sociability, and extraversion, the MANOVA procedure is the appropriate analysis which will test whether the linear combination of these three dependent measures varies as a function of the manipulations (see Huberty &

Morris, 1989). Furthermore, the moderate correlations among the dependent variables (see Appendix D) suggest that a multivariate approach is warranted (Tabachnick & Fidell, 2007). The current research did not specify these three dimensions as being conceptually independent from one another, nor was it anticipated that they would react differently to the independent variables of expectancy type or communication channel. Overall, the 2 x 2 design resulted in four experimental cells used in the analyses for H1 and H2: negative stable personality/voice, negative stable personality/CMC, negative malleable mood/voice, and negative malleable mood/CMC. A summary of all hypotheses and results can be found in Appendix F.

H1a & H1b: Expectancy effects on behavioral judgments in CMC. The first set of hypotheses predicted behavioral effects for expectors and targets interacting via CMC. H1a predicted that expectors receiving the malleable mood induction would be more likely to display positive interaction behaviors than those receiving stable personality expectancies. The first analysis compared judges' ratings of male expectors' behaviors between the negative malleable mood and negative stable personality conditions in CMC dyads. A MANOVA revealed that expectors in the negative malleable mood condition displayed more positive chat behaviors than those in the negative stable personality condition, *Wilks'* $\Lambda = .53$, $F\ (3, 36) = 10.42$, $p = .001$, $\eta^2 = .47$. The analysis for H1b compared judges' ratings of female targets' behaviors between negative malleable mood and negative stable personality conditions. The results indicated that female targets in the negative malleable mood condition responded more positively to their partners' positive discussion behaviors than did targets in the negative stable personality condition, *Wilks'* $\Lambda = .72$, $F\ (3, 36) = 4.72$, $p = .007$, $\eta^2 = .28$. Univariate effects showed that targets in the predicted condition were rated as more socially attractive, sociable, and extraverted. All univariate and descriptive statistics can be found in Table 1.

H2a & H2b: Expectancy effects on behavioral judgments in audio/voice. To test the behavioral disconfirmation effects predicted in H2a and H2b, similar MANOVA procedures were used. In this set of hypotheses, behavioral disconfirmation was predicted for dyads interacting using vocal communication. Again, if behavioral disconfirmation occurs, expectors and targets in the negative mood expectancy condition should be rated by outside judges as more socially attractive, sociable, and extraverted than those in the negative personality expectancy condition. For H2a, judges' ratings of male expectors' behaviors in the voice condition were analyzed, and results indicated a behavioral disconfirmation effect: Expectors in the negative malleable mood condition were rated as more positive on all three dimensions of the interpersonal desirability when compared to expectors in the negative personality condition, *Wilks'* $\Lambda = .68$, $F\ (3, 36) = 5.82$, $p = .003$, $\eta^2 = .32$. Female targets' behaviors indicated a similar pattern. Female targets in the mood condition responded more positively than those in the personality condition, *Wilks'* $\Lambda = .81$, $F\ (3, 36) = 2.98$, $p = .04$, $\eta^2 = .19$. All univariate and descriptive statistics can be found in Table 2. Thus, in both CMC (H1a, H1b) and voice (H2a, H2b), expectations that a target would be in a bad mood led expectors to behave more pleasantly, and targets to reciprocate this pleasantness, than when expectations were that targets had stable unpleasant personalities.

H3: Expectancy effects on expectors' post-discussion perceptions of targets due to media. It was anticipated that perceptual effects would vary across communication channel. This difference was predicted based on the hyperpersonal model, which suggests that certain factors of CMC may facilitate the perceptual disconfirmation when compared to audio/voice. Differences in channel features may explain the conflicting perceptual results reported in Tong's (2011) study that used CMC and Ickes et al.'s (1982) study that used audio/voice. In H3, it was

predicted that expectors' negative expectancies would persist in their partner ratings that followed their audio/voice discussion, but post-chat partner perceptions of expectors in CMC would change to reflect more positive female target ratings. Importantly, this difference in perceptual effects was predicted only for male expectors receiving the malleable mood expectancy rather than the stable personality trait expectancy. In this condition, post-chat perceptions would be more likely to change due to expectors' strategic use of disconfirmation behaviors and targets' reciprocation of those behaviors.

Analysis revealed no difference between expectors' post-discussion perceptions of target partners due to CMC versus voice, *Wilks'* $\Lambda = .94$, F (3, 36) = 1.06, $p = .54$. The univariate and descriptive statistics in Table 3 show that the expectors' post-discussion target ratings in both audio/voice and CMC were quite high, suggesting a perceptual disconfirmation effect. To have a better understanding of the perceptual outcomes, a secondary analysis was conducted to see how expectors' post-discussion evaluations of targets changed as a result of the discussion.

Secondary analysis of perceptual effects. An analysis was conducted replicating the statistical test described by Ickes et al. (1982): A MANOVA compared male expectors' ratings of female targets between the negative malleable mood expectancy, negative stable personality expectancy, and no-expectancy control conditions in audio/voice.[1] Within audio/voice dyads, results indicated a significant difference in expectors' post-discussion ratings of targets, *Wilks'* $\Lambda = .51$, F (6, 50) = 3.38, $p = .008$, $\eta^2 = .49$. Univariate tests were used to discern the pattern of means between the mood, personality, and no-expectancy conditions. Analysis revealed no main effects for expectors' ratings of target social attractiveness, F (2, 27) = 0.25, $p = .78$, or extraversion, F (2, 27) = 0.12, $p = .90$, but a significant effect was found for sociability, F (2, 27) = 4.75, $p = .02$, $\eta^2 = .39$.

A post-hoc Scheffé procedure (p = .05) was conducted for the dependent measure of expectors' ratings of target sociability in audio/voice. Analysis revealed that the mean of expectors' ratings of target sociability in the negative malleable mood condition, M = 6.04, SD = 0.25, was significantly higher than the no-expectancy condition, M = 4.98, SD = 0.25, whereas expectors' ratings of target sociability in the negative stable personality condition, M = 5.46, SD = 0.25, did not differ significantly from either the negative malleable mood condition or the no-expectancy control condition (see Appendix E).

The perceptual effects reported in Ickes et al.'s (1982) voice-only study were only partially replicated in the current research. Despite their apparent positive and disconfirming communication behavior, expectors' post-discussion judgments of target social attractiveness and extraversion were not significantly greater than the no-expectancy control condition. However, examination of the pattern of means for expectors' post-discussion judgments of target sociability suggests a perceptual disconfirmation effect: After their voice discussion, expectors in the negative mood expectancy condition rated targets as significantly more sociable than expectors in the no-expectancy control condition.

A similar analysis was conducted for CMC expectors by examining male expectors' ratings of targets in CMC. The CMC male expectors' post-chat ratings of targets were compared across personality, mood, and no-expectancy conditions. The MANOVA revealed *Wilks'* Λ = .53, F (6, 50) = 3.03, p = .013, η^2 = .47, and the univariate tests revealed effects for expectors' ratings of target social attractiveness, F (2, 27) = 3.52, p = .04, η^2 = .20, sociability, F (2, 27) = 10.37, $p < .001$, η^2 = .32, and extraversion F (2, 27) = 4.71, p = .02, η^2 = .26. Post-hoc mean comparisons using the Scheffé procedure (p = .05) revealed a pattern of perceptual

disconfirmation in which expectors in the negative mood condition consistently showed the most positive post-discussion ratings of targets when compared to the negative personality and no-expectancy control conditions (see Appendix E). The pattern of perceptual disconfirmation reported in Tong (2011) was replicated in the current research.

These post-hoc analyses suggest a partial perceptual confirmation effect in audio/voice reported in Ickes et al. (1982) and the perceptual disconfirmation effect in CMC seen in Tong (2011). Overall, the data provide only partial support for H3. Although there were no differences in voice and CMC expectors' post-discussion ratings of targets in the malleable mood condition, the secondary analyses revealed that the audio/voice expectors' post-discussion perceptions of targets partially replicated the perceptual confirmation results of Ickes et al. Furthermore, the results of CMC expectors post-chat target ratings fully replicated effects from Tong (2011). However, the question to be asked is why the perceptual outcomes would differ between communication channels? Why do expectors experience a perceptual shift in CMC but not in audio/voice? A series of hypotheses posited that self-efficacy and media comfort may help to explain why perceptual outcomes differ across communication channels. Specifically, male expectors' differences in self-efficacy across expectancy and communication channels might affect the processes associated with behavioral and perceptual outcomes found in H1, H2, and H3.

The Impact of Self-Efficacy on Discussion Behavior

One of the main goals of this research is to understand how male expectors' self-efficacy may interact with expectancy and channel variables to produce unique effects on the behavior of expectors and targets. For expectors, their belief in their ability to change the target's negative demeanor should influence them to behave positively during the discussion. In addition, if the

expectors' confidence in their ability to use the channel (e.g., audio/voice or CMC chat) to persuade the target through communication truly does manifest in increased positive behavior, then the behavioral confirmation process also suggests that such positivity should be reflected by targets. Therefore, increased positivity should reveal itself in outside judges ratings of expectors' and targets' behaviors on the dimensions of social attractiveness, sociability, and extraversion.

H4a & H4b: Expector self-efficacy across expectancy and channel. Hypothesis 4 predicted that differences in expectancy type and communication channel would affect expectors' reported levels of partner influence self-efficacy (PISE) and comfort with the communication medium. To test H4, two 2-way ANOVA tests were conducted with expectancy (stable/malleable) and channel (voice/CMC) on each type of self-efficacy.[2]

The first analysis tested the effects of expectancies and channel on PISE, defined as expectors' belief in their ability to influence their partners' demeanor. Analysis revealed no interaction effect, F (1, 76) = 0.82, p = .37, and no main effect for expectancy, F (1, 76) = 0.87, p = .35. However, a difference due to channel, F (1, 76) = 29.75, $p < .001$, $\eta^2 = .28$, indicated that expectors interacting in audio/voice, M = 5.55, SD = 0.18, felt significantly more efficacious regarding their ability to influence their female partners than expectors in CMC, M = 4.21, SD = 0.17. A second ANOVA tested the media comfort component of self-efficacy, or male expectors' communication confidence with either the voice or CMC discussion medium to which they were assigned. There were no main effects for channel, F (1, 76) = 0.53, p =.47, or expectancy, F (1, 76) = 1.13, p =.33, and the interaction between channel and expectancy was not significant, F (1, 76) = 3.88, p = .05. H4 was partially supported.

H5a: Expector PISE on expectors' discussion behavior. To analyze the impact of expectancy, channel, and PISE on judges' ratings of social attractiveness, sociability, and

extraversion, a MANOVA was conducted. The multivariate three-way interaction between expectancy, channel, and self-efficacy was not significant; nor was the two-way interaction effect between channel and PISE, nor the interaction between expectancy and channel, on the pleasantness of expectors' behavior. However, the analysis did produce a significant two-way interaction between expectancy and PISE, *Wilks'* $\Lambda = .88$, $F\ (3, 68) = 3.03$, $p = .04$, $\eta^2 = .12$. No significant main effects for channel type or PISE were found, but a significant main effect for expectancy was found, *Wilks'* $\Lambda = .84$, $F\ (3, 68) = 4.18$, $p = .009$, $\eta^2 = .16$. In all cases where expectancy showed univariate effects they were the same in nature as those discussed above, i.e., malleable expectancies rendered more positive behaviors whereas stable expectancies yielded less positive behavior.

Based on the above results, the SPSS MIXED[3] procedure probed the significant two-way interaction effect of expectancy and PISE on each of the three dimensions of judges' behavioral ratings. First, the two-way interaction of expectancy and PISE was tested on judges' ratings of expectors' social attractiveness. Analyses revealed no two-way interaction of expectancy and PISE on social attractiveness, $F\ (1, 74) = 1.93$, $p = .17$. Significant main effects were found for expectancy type, $F\ (1, 74) = 8.25$, $p = .005$, $\eta^2 = .06$, and PISE, $F\ (1, 74) = 13.46$, $p < .001$, $\eta^2 = .10$. Figure 1 shows that as expectors' PISE increased, judges rated their behavior more socially attractive. In addition, expectors who received malleable mood expectancies displayed more socially attractive behaviors than those receiving stable personality expectations.

The same SPSS MIXED procedure was conducted to probe the two-way interaction effect of expectancy and PISE on the dependent variable of judges' ratings of expector sociability. The analysis did yield a significant two-way interaction of expectancy and PISE on

ratings of sociability, F (1, 74) = 5.55, p = .021, η^2 = .05. The graphic representation in Figure 2 depicts the effect between PISE and expectancy type: As PISE increased, judges' ratings of expectors' sociable behavior converged across both stable and malleable expectancy conditions. Thus when PISE was low, expectors were more sociable in the malleable mood condition than in the stable personality condition. However, as PISE increased, expectors displayed more sociable behavior, regardless of the type of expectancy they received about their partners. Thus the significant main effects for expectancy type, F (1, 74) = 10.76, p = .002, η^2 = .10, and PISE, F (1, 74) = 9.17, p = .003, η^2 = .09, were overridden by the disordinal interaction effect.

Lastly, the univariate test of Expectancy x PISE on judges' ratings of expector extraversion revealed no two-way interaction between expectancy and PISE, and no significant main effects for either expectancy type or expectors' PISE.

Taken together, the results provided in the multivariate analyses and the univariate analyses show the influence of PISE on judges' ratings of expectors' social attractiveness and sociability. As expectors felt more able to influence their partner and if they believed the source of the target's negativity was malleable, they were more likely to behave in a positive manner. Hypothesis 5a was partially supported (see means in Table 4).

H5b: Expector media comfort on expectors' discussion behavior. To understand the impact of expectors' comfort with the medium (i.e., their belief in the ability to use either CMC or vocal communication effectively) on judges' ratings of expectors' discussion behavior, a MANOVA was conducted. The three-way interaction of media comfort, expectancy, and channel was not significant, and none of the two-way interaction effects reached significance. Main

effects for channel, media comfort, and expectancy type were also not significant. The data were not consistent with H5b.

H6: The Effect of Expector PISE, Expectancy, and Channel on Target Discussion Behavior

In the expectancy effects paradigm, the pre-interaction expectancy manipulation influences the male expector to think about the target in a certain way. This affects the way he behaves toward her during the discussion. It follows that the target would then reciprocate the expector's behavioral overtures. The dyadic nature of the expectancy effects paradigm suggests that the expector's ability to influence others and his media proficiency would affect his own behavior, but also the female target's behavior. To understand how the expector's PISE and media comfort influenced the target, similar analyses to the ones described above in H5a and H5b were completed employing data from judges' ratings of *targets'* behavior this time.

H6a: Expector PISE on target discussion behavior. A MANOVA tested the impact of Expectancy x Channel x PISE on outside judges' ratings of targets' social attractiveness, sociability, and extraversion. The analysis produced no three-way interaction effect, and no two-way interactions between channel and expectors' PISE, or between expectancy and channel. A significant two-way interaction between expectancy and expector PISE, *Wilks'* $\Lambda = .85$, F (3, 70) $= 4.09$, $p = .01$, $\eta^2 = .15$, was found. No main effects for channel or expectors' PISE were found, but the analysis did yield a significant main effect for expectancy type, *Wilks'* $\Lambda = .87$, F (3, 70) $= 3.60$, $p = .02$, $\eta^2 = .13$.

Based on the above multivariate results, univariate analyses were conducted to probe the two-way interaction of expectancy type by expectors' PISE for each dimension of outside judges' ratings of target social attractiveness, sociability, and extraversion. The first test analyzed the two-way interaction effect on ratings of targets' social attractiveness using the SPSS MIXED

procedure. Results indicated no interaction effect, F (1, 76) = 0.48, p =.49, and no main effect for expector PISE, F (1, 76) = 2.47, p = .12, or for expectancy type, F (1, 76) = 2.90, p =.08. Overall, it seems that PISE and expectancy type had little effect on targets' social attractiveness.

Similar analyses were conducted for ratings of target sociability. The two-way interaction between expectancy and expectors' PISE was not significant, F (1, 76) = 2.91, p = .09, and there was no main effect of PISE. The only main effect to reach significance was that of expectancy type, F (1, 76) = 6.07, p = .02, η^2 = .07, as has been seen before (see Figure 3). Lastly, an analysis testing the effects of expectancy type and expectors' level of PISE produced no significant interaction effects, F (1, 76) = 0.11, p = .92, or main effects on judgments of targets' extraverted behavior.

Although the MANOVA showed a significant interaction of expectors' PISE with pre-interaction expectancies on judgments of targets' behavior, the pattern was not seen in individual univariate analyses of each dimension of the dependent variable. Instead, in the univariate analyses the interaction effect dissipated, giving way to a main effect for expectancy such that targets who had partners receiving malleable mood expectancies behaved more positively than those who had partners receiving stable personality expectancies. The lack of significant interaction effects in the univariate tests may be due to the fact that in the initial MANOVA test, the effects of all three dependent variables were considered in combination within a single analysis. When these dependent variables were combined, the interaction became apparent. When separated, the interaction effect was not detected by each single test. In this unique instance, the MANOVA was able to detect significant differences in the dependent variables that were not seen in the separate ANOVAs (Tabachnick & Fidell, 2007). H6a was partially supported.

H6b: Expector media comfort on target discussion behavior. To understand how expectors' comfort with the media would interact with expectancy and channel type to impact female targets' social attractiveness, sociability, and extraversion, a MANOVA was conducted. Results indicated no significant three-way effect, and no significant two-way interactions between channel and expectancy and channel and expectors' media comfort. A significant interaction between expectancy and expectors' self-reported media comfort was detected, *Wilks'* $\Lambda = .88$, $F\ (3, 70) = 3.29$, $p = .03$, $\eta^2 = .12$. No main effects for channel or expectors' media comfort were found, but the main effect for expectancy type was significant, *Wilks'* $\Lambda = .84$, $F\ (3, 70) = 4.30$, $p = .008$, $\eta^2 = .16$.

Univariate tests were conducted to probe the significant interaction effect of expectancy and expectors' media comfort for each dimension of the dependent variable. First, the two-way interaction effect was tested with ratings of targets' socially attractive behavior. Results revealed a significant interaction between expectancy and expectors' self-reported media comfort, $F\ (1, 76) = 4.19$, $p = .04$, $\eta^2 = .04$. The graphical representation in Figure 4 shows the disordinal nature of the interaction of expectancy and expectors' media comfort. When expectors' media comfort was low, they were more influential on the targets' social attractiveness behavior when they anticipated her negative mood rather than her negative personality. However, as expectors' comfort with the communication medium increased, targets' social attractiveness converged across malleable mood and stable personality conditions, a similar pattern seen in the results of H5a.

Analyses on outside judges' ratings of target sociability revealed a similar two-way interaction of expectancy type and expectors' self-reported media comfort, $F\ (1, 76) = 8.51$, $p =$

.005, η^2 = .09. Figure 5 shows the same disordinal interaction effect: At low levels of expector media comfort, expectors in the malleable mood condition had greater influence on the targets' sociability than expectors' in the stable personality conditions. But, ratings of targets' sociable behavior converge at high levels of expectors' media comfort across both malleable mood and stable personality expectancies. As expectors belief in their ability to communicate using the assigned channel increases so does their partners' sociability across both types of expectancies. The significant main effects for expectancy type, F (1, 76) = 12.47, p = .001, η^2 = .13, and expectors' media comfort, F (1, 76) = 4.70, p = .03, η^2= .05, were overridden by the disordinal nature of the interaction.

Analyses regarding judges' ratings of target extraversion also showed a significant two-way interaction between expectancy and expectors' comfort with the media, F (1, 76) = 4.77, p = .03, η^2 = .05. Figure 6 shows the same pattern seen in the other dimensions of the dependent variable in the analyses for H6b. When expectors have low levels of media comfort, but receive a negative, malleable mood expectation about the target, ratings of target extraversion are higher than when expectors receive a negative, stable personality expectation. However, at high levels of expector media comfort, ratings of target extraversion converge such that targets are rated as very highly extraverted in both malleable mood and stable personality expectancy conditions.

The multivariate and univariate analyses suggest that expectors' comfort with the given communication medium interacts with expectancy type to impact targets' discussion behavior. It seems that when expectors do not feel efficacious with the media, their influence over the targets' behavior is much greater when they also believe that targets' negativity is malleable rather than stable. However, when they feel confident in their ability to communicate using the

assigned medium (i.e., exhibit high media comfort scores) they can induce targets to behave more positively regardless of expectancy type. Thus data were consistent with H6b.

H7: The Effect of Self-Efficacy on Expectors' Post-discussion Perceptions of Targets

Following Ickes et al. (1982), if a male expector believes that that his own communication behavior had an impact on his partner during the discussion, then he may be less likely to attribute any of her positive (i.e., behaviorally disconfirming) discussion behaviors to her actual nature, and more likely to attribute her positive demeanor to his own influence. If this is the case, analyses should reveal a negative relationship between self-efficacy and perceptual evaluations: As an expector's belief in his own PISE increases, post-chat ratings of his partner's demeanor should be less positive.

The results of H4 showed that expectors using audio/voice reported greater amounts of PISE than expectors in CMC chat. This would suggest that impact of expectors' feelings of self-efficacy on post-chat perceptual evaluations of targets would be stronger in the voice than in CMC chat, and expectors should attribute any changes in female targets' demeanor to themselves rather than their partners following a voice discussion. Following Ickes et al. (1982), expectors' greater self-efficacy should be associated with more negative post-chat evaluations of targets. The reverse should occur in CMC: When expectors feel low PISE and media comfort in CMC, yet they nevertheless behave positively and their partners reciprocate with positive behavior, they are less likely to "take credit" for their partners' positive demeanor, suggesting a smaller negative correlation (or none at all) between expectors' self-efficacy and their post-chat ratings of targets' demeanor.

However, a rival prediction to the one asserted above is that expectors' higher levels of PISE and media comfort might actually induce them to believe that they were able to impart a

lasting influence, changing their partners' demeanor from negative to positive. In this case, greater PISE and media comfort might actually be associated with perceptual disconfirmation: At the end of the discussion expectors with the greatest self-efficacy would believe that they were so influential, that they created a positive demeanor shift in the targets at the end of the discussion. Given that expectors' PISE and media comfort were higher in voice than they were in CMC, we may expect either simple associations of PISE and media comfort on expectors' post-discussion perceptions of targets, or an interaction of self-efficacy and channel on in perceptual disconfirmation. A negative association between expectors' self-efficacy and expectors' post-discussion ratings of targets' demeanor constitute a classic perceptual disconfirmation (target's disconfirmed the expectancy and the expector does not take credit). However, if high efficacy expectors take credit for targets' positive change in demeanor, this would constitute a novel albeit logical form of perceptual effects which has not appeared in previous research.

H7a: Expector PISE on expectors' post-discussion perceptions of targets. To analyze H7a, a MANOVA approach assessed the effects of expectancy, channel, and PISE on expectors' post-discussion ratings of targets' social attractiveness, sociability, and extraversion. The three-way interaction was not significant, nor was the two-way interaction between expectancy and PISE, or expectancy and channel. Results did reveal a significant interaction between channel type and PISE, *Wilks'* $\Lambda = .87$, $F\ (3, 70) = 3.61$, $p = .02$, $\eta^2 = .13$, and a significant main effect for channel type, *Wilks'* $\Lambda = .87$, $F\ (3, 70) = 3.56$, $p = .02$, $\eta^2 = .13$, but no main effect for PISE or expectancy type.

The SPSS MIXED procedure was used to probe the significant interaction effect reported above of channel and expector PISE for expectors' ratings of target social attractiveness, sociability, and extraversion. These analyses revealed a crossover interaction effect of PISE and

channel for each dimension of the dependent variable. First, for expectors' post-discussion ratings of target social attractiveness, a significant two-way interaction of channel and PISE was found, F (1, 76) = 12.65, p = .001, η^2 = .14 (see Figure 7). For expectors' post-chat ratings of target sociability, the analysis revealed a significant interaction effect of channel by PISE, F (1, 76) = 5.56, p = .02, η^2 = .06 (see Figure 8). Lastly, analyses indicated a similar pattern of results for the interaction of channel and PISE on the extraversion dimension that was seen in the above analyses, F (1, 76) = 4.85, p = .03, η^2 = .07 (see Figure 9).

As the means in Table 8 show, the impact of PISE on expectors' post-discussion ratings of targets was different CMC and voice. There were crossover interaction effects of channel and PISE on expectors' post-discussion ratings of targets' social attractiveness, sociability, and extraversion (see Figures 7, 8, and 9, resp.). In CMC, greater levels of PISE led to decreases in post-chat evaluations of target social attractiveness, sociability, and extraversion. The effect of PISE on target ratings in the voice condition was opposite that of CMC. In voice, as expectors' PISE increased, so did their post-chat ratings of targets social attractiveness, sociability, and extraversion. In summary, the more efficacious expectors felt in their ability to impact their partners' demeanor in voice, the more positive they rated their partners to be after the chat, whereas the opposite was true in CMC. This suggests that expectors in audio/voice were able to convince themselves that their PISE ability may have actually prompted the target to truly change her negative demeanor. In voice, expectors experienced a perceptual shift, believing that the target's demeanor truly did change from negative to positive as a result of expectors' high PISE. In CMC however, perceptual disconfirmation occurred at low levels of PISE where expectors attributed targets' demeanor shift less to themselves, and gave more credit to the

targets. The correlations in Appendix D show the negative correlation between expectors' post-chat ratings of targets and PISE in CMC, and positive relationships in voice. Potential explanations for this differential effect of PISE in each channel are addressed in the discussion section.

H7b: Expector media comfort on expectors' post-discussion perceptions of targets. A similar MANOVA procedure to H7a was conducted to understand how expectancy, channel, and expectors' media comfort would impact expectors' post-chat ratings of targets social attractiveness, sociability, and extraversion. The three-way interaction effect was not significant. Additionally, neither the interaction between expectancy by media comfort nor the interaction between expectancy and channel was significant. However, the two-way interaction of media comfort and channel was significant, *Wilks'* $\Lambda = .83$, F (3, 70) = 4.93, $p = .004$, $\eta^2 = .17$. The main effect for channel was significant, *Wilks'* $\Lambda = .81$, F (3, 70) = 5.45, $p = .002$, $\eta^2 = .19$, but the main effects for expectancy type and media comfort were not.

Univariate analyses were conducted to probe the interaction effect of media comfort and channel for each dimension of the dependent variable. The first analysis probed the effects of channel and expectors' media comfort on expectors' post-discussion ratings of target social attractiveness. Results indicated a significant crossover interaction effect, F (1, 76) = 18.05, $p < .001$, $\eta^2 = .19$ (see Figure 10). A similar interaction effect of channel and media comfort was found for expectors' post-discussion ratings of target sociability, F (1, 76) = 5.18, $p = .03$, $\eta^2 = .06$ (see Figure 11). Lastly, the SPSS MIXED procedure was conducted for expectors' post-discussion ratings of target extraversion. Results indicated a significant two-way interaction between channel and media comfort, F (1, 76) = 10.62, $p = .002$, $\eta^2 = .12$ (see Figure 12).

Overall, it appeared that expector media comfort had a similar impact on post-discussion target ratings as expector PISE. Figures 10, 11, and 12 show the interaction effects of channel and media comfort on post-discussion target ratings. Specifically, in audio/voice, increases in media comfort were directly related to increases in post-discussion target ratings, whereas in CMC, expectors' post-discussion target ratings decreased as media comfort increased. The means listed in Table 9 indicate that post-discussion ratings of targets in CMC were still quite high (i.e., above the midpoint) at high levels of media comfort. While the means of expectors' post-discussion target ratings reflect the overall pattern of perceptual disconfirmation found in H3, it appears that the perceptual disconfirmation effect became less pronounced at higher levels of media comfort for expectors in CMC. The opposite pattern was true for audio/voice. As media comfort increased, expectors were more likely to experience an attitude shift, and evaluated targets as more socially attractive, sociable, and extraverted at the end of the discussion.

Discussion

By testing the impact of expectancies, communication channel, and individual self-efficacy differences on communication behavior and interpersonal evaluation, the current experiment replicated and extended the findings of previous expectancy effects research. These findings have important implications for the expectancy effects paradigm, interpersonal, and CMC theory more generally.

Implications for Expectancy Effects Research

The two hypotheses in this experiment regarding behavioral effects (H1 and H2) were supported in audio/voice communication and CMC chat. Expectors receiving negative, malleable mood expectancies produced more positive (e.g., disconfirming) behavior than expectors receiving negative, stable personality expectancies. Furthermore, female targets reflected their

partners' behavior, displaying more positive behavior in the malleable mood than the stable personality expectancy conditions. The behavioral disconfirmation effects reported in previous studies (Ickes et al., 1982; Tong, 2011) were replicated in the current experiment. It can be concluded that the stability/malleability variable is an especially strong influence on the expectors' choice to deploy either confirmation or disconfirmation tactics during the conversation. The results showed a clear pattern: When an expector believed that the source of his partner's negativity was due to her malleable mood, he was more likely to implement positive, disconfirmation tactics than when he believed her negativity was caused by her stable personality.

In one of the most important findings of this study, the prediction asserted in H3 regarding perceptual effects due to communication channel, was not initially supported, although secondary analyses and interactions between channel and self-efficacy revealed a more complicated set of relationships than that which H3 predicted. No differences in expectors' post-chat perception ratings of targets were found between CMC and voice when compared in this manner. However when perceptual outcomes were examined within CMC dyads only, expectors' post-chat evaluations of targets replicated previous findings reported in Tong (2011). Expectors in the CMC mood condition experienced a perceptual shift away from the negative pre-interaction expectations when compared to negative personality and no-expectancy control conditions. The perceptual confirmation effect reported in Ickes et al.'s test in audio/voice communication was only partially obtained. When compared to the no-expectancy control condition, expectors in the negative mood and personality expectation conditions reported no differences in their post-discussion ratings of targets' social attractiveness or extraversion. This partial perceptual confirmation effect paralleled results reported in Ickes et al. (1982), however,

expectors' ratings of target sociability did show perceptual disconfirmation such that expectors in the negative mood condition revealed more positive post-discussion ratings than the no-expectancy control condition.

The broad implication of these findings is that pre-interaction expectancies influence behavior during conversation and the interpersonal perceptions following interaction. Like previous confirmation and disconfirmation research, expectors in this study reacted to the potential behavior they anticipated from the target, creating a feedback loop in which targets reciprocated expectors' positive behaviors. Although the results regarding perceptual outcomes in voice were somewhat inconclusive, the current research does provide important replication of previous findings of behavioral and perceptual effects in vocal channels (Ickes et al., 1982) and behavioral and perceptual effects in CMC (Tong, 2011). Furthermore, it is clear from the results of this study that the stability or malleability of expectancies is an important causal variable that impacts how and when expectors choose to implement confirmation versus disconfirmation tactics.

The current findings provide more evidence that expectancy effects can occur in other mediated channels besides audio/voice, despite Ickes et al.'s contention to the contrary. Although many theorists have claimed that nonverbal communication is necessary for the transmission of dyadic expectancies and their effects (Archer, Akert, & Costanzo, 1993; Buck, 1993; Burgoon & Le Poire, 1993; Darley & Oleson, 1993; DePaulo, 1993; Hall & Briton, 1993), the current results show that the previous emphasis on nonverbal parameters should be expanded to include other types of verbal or linguistic behavioral cues (Berger, 2005). Since the reduced cue environment of CMC was able to support the same behavioral and perceptual outcomes found in previous

experiments, future work examining expectancy effects is free to test other communication channels that do not necessarily involve nonverbal cue systems.

The role of self-efficacy and expectancy malleability in communication behavior. One of the most important contributions of the present research is the inclusion of self-efficacy dimensions in the behavior (dis)conformation framework. Ickes et al. opened the possibility that disconformation rather than confirmation may occur when an expector believes that the target's demeanor can be changed, but Ickes et al. only considered expectors' beliefs about the receiver: targets' susceptibility to change. They did not consider the role of an expector's beliefs about himself: how strongly he believes he can change people. The present study indicates that the second component appears to be as potent as the first.

As shown in the results of H1 and H2, expectancy stability/malleability was a crucial variable necessary for the expectors to enact the process of behavioral disconfirmation: Expectors needed to recognize that the source of the target's negative expectancy was flexible and open to influence. In other words, stable personality and malleable mood expectations varied the target's *potential* to change, thereby influencing the expector's likelihood to select disconfirmation strategies.

However, other factors besides expectancy stability/malleability were predicted to affect the expectors' selection of behavioral disconfirmation tactics. These included the expector's (a) his belief in his own ability to act upon the target's potential malleability and create positive change in the target (PISE) and (b) his belief in his ability to communicate effectively using vocal communication or CMC chat (media comfort).

Results of H4 revealed that overall, expectors reported greater levels of PISE with vocal communication than CMC chat. In addition, they reported the highest level of media comfort and

confidence in the malleable mood/voice condition. These results reflect the long-standing perception about vocal communication's expressive superiority over CMC that has routinely shown up in the literature surrounding mediated communication (e.g., Baym, 2010), and so the inflated feelings of self-efficacy in voice compared to CMC are not surprising.

What is surprising is the unexpected ways in which PISE and media comfort interacted with expectancy type and communication channel. The results of H5a and H5b indicate that expectors displayed more socially attractive discussion behaviors when they reported high levels of PISE and anticipated female targets with malleable negative moods. This effect was consistent across both voice and CMC. Expectors were correct: Their behavior was more socially attractive (according to objective judges) the more they believed in their own ability to influence their partners' negative, but malleable, demeanor.

Interestingly, this interaction effect of PISE and malleable expectancy type was not found for behavioral ratings of expectors' sociability. In this dimension of the dependent variable, when expectors reported high levels of PISE, behavior converged across expectancy type, leading outside raters to judge them as being equally sociable in both malleable mood and stable personality conditions

A crossover interaction was found for the effect of expectors' PISE and expectancy type on judges' ratings of target behavior. When expectors reported lower levels of PISE, targets behaved more positively in the malleable mood compared to the stable personality conditions. However, expectors reporting high levels of PISE induced positive behavioral changes in female targets, in both mood and personality conditions. In addition, expectors' reported level of media comfort also impacted target behavior. When expectors felt greater confidence with the medium they were using during the discussion, they were able to induce targets to behave in ways that

objective judges found more socially attractive, sociable, and extraverted, regardless of expectancy type. Even when expectors attributed targets' negativity to stable personality, their confidence in their ability to use the communication medium transcended this expectation. Increased feelings of media comfort allowed them to perform positive communication behaviors and elicit that same positivity from targets regardless of expectancy type.

Overall, the results of the behavioral data are quite clear. First, when behavioral ratings are compared across stable expectancy, malleable expectancy, and no-expectancy control conditions, malleable expectations clearly influenced expectors to treat targets more positively, and targets responded accordingly. These behavioral results provide empirical verification for post-hoc assertions made by Ickes et al. (1982) and Burgoon and LePoire (1993) about the role of expectancy malleability during interpersonal interaction, and extend these phenomena to CMC. When an expector believes that the source of his partner's demeanor is changeable, he alters his own behavior in anticipation of her apparent openness to influence.

However, target malleability is only one factor influencing an expector's display of disconfirmation behavior. In addition to target malleability, the expector's own self-efficacy affects the extent of his behavioral disconfirmation, and/or the degree he can induce his partner to reciprocate his behavior. When expectors feel unable to influence their partner and communicate using the assigned medium, the effect of the expectancy type is strong: Expectors with low levels of PISE and media comfort were able to display and elicit positive, disconfirmation target behaviors moreso in the malleable mood condition, but less so in the stable personality condition. However, when PISE and media comfort were high, the expectancy malleability did not matter quite so much. Expectors behaved similarly across malleable and

stable conditions and brought out similar levels of positive behavior in their female partners when their PISE and media comfort were greater.

Taken together, the results of H4, H5, and H6 show that expectors' belief in their ability to influence their partners and use the communication medium were powerful factors that transcended communication channel and stable versus malleable expectancy type to shape their own and their partners' discussion behaviors. The current research provides an extension of previous work by identifying the importance of expectancy malleability, and the role of expector self-efficacy on the behavioral disconfirmation of interpersonal expectancies.

The role of self-efficacy and expectancy malleability in interpersonal perception. The impact of self-efficacy is more difficult to discern when it comes to expectors' post-discussion perceptions of targets. In voice, expectors' PISE and media comfort were both positively correlated with expectors' post-discussion perceptions of targets (see correlations in Appendix D); but in CMC, a negative correlations between both expectors' PISE and media comfort with post-chat target ratings emerged. Expectors in voice who felt less self-efficacy continued to rate their partner more negatively after the discussion. In CMC, however, lower levels of self-efficacy were associated with a positive perceptual shift away from negative pre-interaction expectations.

Why might this difference in self-efficacy across CMC and voice exist? For one, it was seen in H4 that expectors reported feeling more efficacious using vocal communication than CMC chat to influence their partners. The average expector using CMC chat had relatively lower levels of self-efficacy, which may cause him to disregard the impact of his own behavior on post-chat perceptions of targets' demeanor (as evidenced by the correlational analyses described above). This may have led him to attribute any transformation in the target to her own desire to

change, rather than his ability to induce it. Conversely, if an expector in CMC felt high efficacy, he may have been more inclined to believe that he induced changes in target demeanor through his own behavior. By contrast, high PISE and media comfort in audio/voice may have convinced expectors that they not only affected targets' conversation behavior, but may have convinced their partners to actually be more positive people, or feel a more positive mood.

Another explanation for the differential impact of self-efficacy in each channel may be that the performance of disconfirmation behaviors is more cognitively taxing in CMC than in voice, and so expectors in CMC were more mindful of their behavior and their influence over their partners. Evidence of this increased attentiveness in CMC was seen in expectors' responses to the open ended questions of, "Think about your discussion behaviors. What, if anything did you do to deliberately please or displease your partner? Did you employ any specific strategies to make sure the conversation was pleasant or unpleasant?" More male expectors in CMC (n = 25) reported strategically thinking through their communication behaviors than expectors interacting in the voice channel (n = 17). A binomial test of proportions showed that this was a statistically significant difference, Z = 3.47, p = .003. Similarly, more expectors in voice conditions gave responses such as, "I didn't think about my behavior—just tried to go with the flow" or "I was just myself." On the other hand, CMC expectors remarked about specific, planned behaviors: "[I] Like to make jokes, and make people smile, which certainly helps to make things easier and more pleasant" and "i (sic) definitely went out of my way to please my partner by talking about what she wanted to talk about when she changed the topic." Although behavioral data showed that expectors in both channels displayed similar levels of social attractiveness, sociability, and extraversion, expectors' open-ended responses suggest that they were more mindful of their chat behavior in CMC.

The increased mindfulness of CMC expectors found in the current experiment follows previous research by Matheson and Zanna (1988) who reported that CMC users had greater levels of "private self awareness" and "marginally lower public self-awareness" in comparison to FtF communicators. Walther (2007) found that when participants were asked to construct asynchronous messages for recipients using CMC conferencing, increased mindfulness in CMC was associated with both greater word production and greater message editing. The message composition abilities made possible by CMC's technological features may also (inadvertently) increase the salience of the communication behaviors themselves. It is further possible that expectors' heightened attention to their own communication behaviors in CMC may be one explanation for why expectors may have dismissed targets' own volition as the source of her positive demeanor change. In other words, expectors' focused more on their own behaviors than their partners' behaviors in CMC, and this differential attention may account for attributional disconfirmation patterns seen in CMC but not in FtF. However, since this assertion was not specifically tested in the current study it must be interpreted with caution; it remains an issue for future research to investigate if increased mindfulness in CMC impacts expectors' attribution processes.

Overall, the role of expectors' self-efficacy in interpersonal perception in CMC and voice was quite different. The perceptual disconfirmation effect was strong in CMC: When expectors' levels of PISE and media comfort were low, perceptions of targets were positive, but this effect began to dissipate as PISE and media comfort increased in CMC and disconfirming conversation behaviors became more mindful. In voice, when expectors' self-efficacy was low, little perceptual change occurred; however when their self-efficacy was high, expectors' post-discussion evaluations of targets became more favorable, revealing a pattern of perceptual

disconfirmation. Thus expectors' self-efficacy proved to be an important factor which affected expectors' perceptions of targets differently in CMC and voice.

Implications for Communication Theory

With regard to goal-oriented models of communication, this research implies that when pre-interaction expectancies motivate expectors to strategize cognitively or plan out their behavior, they are more likely to attribute change in the targets' demeanor to their own persuasive power and self-efficacy than to the targets themselves. However, it must also be mentioned that goals were not explicitly manipulated in the current research. It was assumed that the intrinsic "primary" goal of the interaction would be to maintain a smooth, harmonious conversation while minimizing face threats, disagreements, or conflict (Burgoon & LePoire, 1993; Dillard, 1997).

With regard to CMC theory, this research challenges statements made in Walther's (1996) original conceptualization of the feedback component of the hyperpersonal model. As originally conceptualized, the hyperpersonal model only outlined the possibility of behavioral confirmation effects. And while it is true that CMC can support behavioral and perceptual confirmation (see Tong, 2011), the current experiment provides empirical evidence that behavioral and perceptual disconfirmation effects also occur in CMC.

The current findings parallel other research that reported communicators' ability to dispel stereotypical expectations of intelligence and unintelligence in both CMC and voice communication channels (Walther et al., 2011). Furthermore, the results of H3 suggest that compared to voice, CMC may be more amenable for the facilitation of perceptual disconfirmation effects. One potential reason that perceptual disconfirmation may be more likely to occur in CMC over audio/voice might be the increased feelings of intimacy that come with the

same levels of self-disclosure. In their study, Jiang et al. (2009) describe the "disclosure-intimacy link," whereby communicators in CMC report greater intimacy as a result of self-disclosures than communicators receiving the same amount of self-disclosures in FtF. Compared to FtF, if CMC expectors are able to coax the same type of positive behaviors and self-disclosures from targets, but ascribe greater levels of relational intimacy, the result should be a heightened perceptual disconfirmation effect.

In the current study, within the malleable mood condition (the condition where behavioral and perceptual disconfirmation effects occurred), there was no difference in the amount of positive discussion behaviors that targets displayed between voice and CMC, *Wilks'* $\Lambda = .98$, $F\ (3, 36) = 0.28$, $p = .84$. In addition, targets disclosed the same type of information during voice and CMC discussions (common topics included college major, age, hobbies, and activities). Despite the apparently equal amount of conversational positivity displayed by targets in voice and CMC, expectors may have attributed greater relational intimacy to target communication in CMC than voice. This "hyper" sense of relational intimacy created by the disclosure-intimacy link may explain how and why the positive perceptual shift was more likely to occur among expectors in CMC than in audio/voice, and especially at lower levels of PISE and media comfort in CMC. The differential impact of self-efficacy and planned behavior in each channel should be extended in future research, to verify what factors in each channel may change how self-efficacy functions with regard to interpersonal perception.

Limitations

The current research suffered from some limitations regarding measurement. A question that arises from this research is the lack of consistency across the three dependent variables, social attractiveness, sociability, and extraversion. Although no pattern is readily apparent in the

data across these three dimensions, differences in the dependent variable could be due to other sources of variance (e.g., vocabulary, linguistics, nonverbal content, amount of questions and answers) that were not assessed or analyzed in the current research. Future research may apply a more finite coding procedure to see if such nonverbal or verbal content may affect behavioral ratings and self-reported perceptual data.

Another important factor of self-efficacy that was not included in the current study was expectors' self-presentation self-efficacy. The development of new items designed to measure self-presentation self-efficacy suffered from poor reliability, and so this variable was subsequently unable to be tested in the current analyses. It was anticipated that expectors' self-presentation efficacy would have an impact on the ways in which expectancies functioned in both CMC and voice. Future research should measure this variable to see how it impacts dyadic communication and interpersonal evaluation.

More broadly, the variables tested and results found here may not necessarily apply to other communication episodes where impressions are more fully developed, and expectancies more deeply embedded. One possible criticism of this research, and the expectancy effects paradigm more generally, is that the results are perhaps only applicable to zero-history dyads, where expectors and targets are unacquainted. Work by Ramirez and Wang (2008) suggests that the effects of the confirmation and disconfirmation of expectancies can be affected by the disclosure of information revealed through modality switching (i.e., moving from visually anonymous CMC chat to FtF communication), the timing of that disclosure, and the length relationship.

Following expectancy violations theory (see Burgoon, 1993), Ramirez and Wang (2008) investigated how expectancy violations produced by modality switching increased or decreased

uncertainty and interpersonal evaluation. They designed a 2 (modality switch vs. no modality switch) x 2 (long-term/9 week interaction vs. short-term/3 week interaction) study, and found an interaction effect of length and modality switch. Specifically, participants in short-term dyads rated their partner's behavior more positively when they switched modalities compared to when they remained in CMC. The pattern was reversed among long-term dyads: long-term partners who remained in CMC gave their partners higher evaluations compared to dyads who met FtF. This pattern of results led Ramirez and Wang to suggest that expectancies for both dyads were violated in the modality switch, however the violations were not interpreted the same. Following EVT, short-term dyads experienced a "positive violation" whereas long-term dyads experienced a "negative violation" of their initial expectations. An important implication from this research is that although both long- and short-term dyads experienced behavioral disconfirmation, the difference in relational timing led to different perceptual outcomes.

Like the short-term dyads in Ramirez and Wang's study, expectors in the current research experienced a "positive violation" of pre-interaction expectations of target negativity. For zero-history, unacquainted dyads in the current research, the positive violation of negative mood expectations led to a perceptual disconfirmation effect where expectors' attitudes towards targets shift. At the end of the short discussion, expectors' reported positive interpersonal evaluations of targets, just like the short-term dyads who switched modalities in Ramirez and Wang's (2008) study.

A noted issue with Ramirez and Wang's study is that dyads moved directly from CMC chat to FtF. Other work examining long-term dyads suggest that partners tend to progress first through exchange of pictures, emails, or telephone calls (e.g., Parks & Floyd, 1996) before meeting FtF. Still, the results of this study suggest a more complex pattern for the role that

expectancies play when known individuals interact through various forms of mediated and non-mediated communication channels. As originally claimed in the hyperpersonal model, long-term CMC partners may develop deeper, more positive, or idealized impressions and expectations. Under these conditions, long-term partners seek confirmation of their initial, idealized expectancies. This could explain why in long-term dyads in Ramirez and Wang (2008) rated the social information revealed in the modality switch as uncertainty provoking and highly negative; rather than confirming their idealized, positive pre-modality switch expectations, the information was inconsistent and resulted in perceptual disconfirmation. Although the generalizability of the current results is perhaps limited only to zero-history, unacquainted partners, future research could examine expectancy effects between previously acquainted dyads.

Issues for Future Research

Context. As noted above, one of the greatest limitations of expectancy effects research is the experimental approach that is used to test it. Although experimentation has been integral in uncovering the theoretical processes of expectancies, it is a valid critique to question the limited ecological validity of these studies. However, we can imagine certain situations where individuals may form impressions and expectations online, use CMC channels to get acquainted, and then progress to other mediated (e.g., audio/voice communication such as phone calls), and unmediated (FtF) channels. Online dating provides an organic setting in which to test expectations. Many researchers have shown how daters manipulate online profile information to present a desirable self-image (Ellison, Heino, & Gibbs, 2006; Fiore & Donath, 2004) which often leads to the formation of exaggerated impressions or expectations. It is on the basis of these expectations and impressions that daters select one another and engage in further communication, such as email, chat, and phone calls. Fiore and Donath (2004) suggest that

"getting acquainted" conversations are often initiated via the online dating system's private messaging channel, which allows daters to find out whether they want to continue the interaction. Whitty (2008) points out that daters often try to "verify" information (and by extension, expectations) in email exchanges, phone calls, and especially in FtF meetings. In this case, the confirmation and disconfirmation of initial expectancies between two, unknown individuals performed through in online dating provides communication context in which to apply the results of the current study and extend future empirical investigations.

Importantly, other dynamics in the confirmation/disconfirmation processes may be affected by the online dating context, such as romantic relationship goals. Daters are not trying to make the best of a short-term experimental situation, they are people looking for a romantic connection, a date, or sometimes, even a life partner. But this presents an interesting avenue for future research to investigate. Future research should examine variables such as acquaintance, time, goal orientation, and modality switching to see if they may impact the behavioral and perceptual effects of expectancies in interesting and unanticipated ways.

New media. The ever-evolving forms of technology raise questions about the process and outcomes associated with interpersonal expectancies and impressions in light of new media. In this experiment, CMC resulted in perceptual disconfirmation of targets, but what specifically about the CMC channel contributed to these differential effects? A related issue stems from the operationalization of CMC in the current experiment as synchronous chat: Do the findings of the current research apply to other types of CMC? To address these questions, certain dimensions of CMC that might affect behavioral and perceptual outcomes are identified and discussed below.

The first dimension to consider is channel synchrony and its impact on conversational behavior and perceptions. Would the behavioral and perceptual outcomes associated with

synchronous chat be different in real-time or asynchronous systems? To understand why synchrony becomes a critical variable that may impact expectancy outcomes, we must consider its effect on expector' and targets' control over message construction. At one end of the synchrony dimension are real-time systems such as Skype, which involve rapid message exchange through a form of mediated web-conferencing. Skype involves a much faster form of message exchange than synchronous chat, and its immediacy would restrict the amount of time that individuals could spend composing messages. Thus although Skype could be classified as a form of CMC, it is clear that its dimensions are more closely aligned with audio/voice, or perhaps FtF. This reduced control over conversational and self-presentation behaviors might lead to differences in how expectors and targets behave, and also how they perceive each other. Anchoring the opposite end of the synchrony dimension are asynchronous systems, such as email. Email would provide dyads with more time to craft messages, to manage impressions, and to achieve partner influence goals associated with the expectancy effects paradigm. Presumably, email exchange would also take a longer amount of time, perhaps leading to increases in feelings of relational intimacy and interpersonal liking and desirability. Since the current experiment did not explicitly test synchrony as an independent variable, future research should uncover if synchrony leads to differences in behavioral or perceptual outcomes.

A second factor is the amount of cognitive attention that individuals place on their own communications in CMC versus audio/voice. It was shown that expectors paid greater attention to their own behaviors in CMC compared to audio/voice, and this heightened attention may have affected their post-chat perceptions of their partners. Unfortunately, the current study cannot address what specifically about the chat interface led to increases in expectors' attention over audio/voice. However, since increased mindfulness has been shown to occur with other forms of

text-based CMC like email (Walther, 2007), it can be inferred that other forms of text-based CMC produce a similar increase in cognitive attention. Perhaps it was the visual presentation of textual messages in CMC chat that increases attention, as opposed to the more fleeting nature of auditory messages in spoken communication. Seeing and reading one's own messages visually on the computer screen may have reinforced the salience of one's own communication in CMC chat. Increased salience could have led expectors to attribute changes in the targets' demeanor to themselves rather than their partners but only in CMC, rather than in audio/voice. The specific mechanisms remain indeterminable, but current and past research has been able to show that differential cognitive attention exists in CMC. In this study, attention across channels did play a role in how expectors perceived their own behavior, and their own self-efficacy which may have also affected the way they perceived the entire conversation and the subsequent perceptual attributions they made about their discussion partners.

A third factor that deserves consideration is the use of language in vocal communication and CMC. Although early communication theory sometimes conceptualized text-based messages in CMC typed speech, more recent work has shown that vocal and electronic communication are not created equal, especially when it comes to forming impressions of others (Walther et al., 2011). The language and discourse used in IM chat have been shown to differ from vocal speech and written communication. In their sociolingustic analysis of IM chat conversations among teens, Tagliamonte and Denis (2008) suggest that while the language used in chat is "firmly rooted in the model of the extant language," it is also "a vibrant new medium of communication with its own unique style" (p. 24-25). They suggest that the language used in CMC chat is a "hybrid" of both formal and informal variants that blends to create unique features not usually seen in other channels. Some features such as colloquial fusions of words (e.g., "gotta," "gonna")

and intensifiers ("I miss you sooo much") appear in vocal and written communication, other innovative linguistics such as emoticons (☺), and abbreviations (LOL, OMG) are unique to CMC chat. The current research did not code for these linguistic differences, but it is possible that dyads adapted to the sociolinguistic system associated with IM and chat which altered the dynamics of expectancies and created new perceptual effects not previously seen in other work.

To ask which specific CMC systems may facilitate or hinder expectancy effects is perhaps less useful than to ask what dimensions of CMC may support, change, or impact our existing understanding of the expectancy effects process. CMC has become a very broad label encompassing everything from real-time video web conferencing, synchronous chat, social media, and asynchronous email. It is more likely that individuals adapt their communication to the cue systems that are available in any given channel, mediated or not, and understanding how people adjust to the different capacities of media is an issue for future research. As technology develops and the information cues in computing systems continue to change, future research must identify what features distinguish new media, and how these features affect expectancies.

Conclusion

In the end, the findings show that pre-interaction expectations affect communication behavior and interpersonal perceptions. It seems that there were two strong sources of influence which affected the ways in which an expector treated his partner during the conversation and how he thought of her afterwards: (1) the expector's belief in the extent to which the target was open to influence and (2) the expector's belief in his own communication self-efficacy. Expectors' perceptions of their own self-efficacy seemed to play a large role in their interpersonal evaluations of targets, perhaps an even larger role than actual behavior, suggesting that perhaps an expector's selective perception allows him to believe what he wants to believe.

Endnotes

[1] Because the offset control condition contained fewer participants than in the other experimental conditions, participants from the other two conditions were randomly selected to maintain equal cell sizes of 10 per condition, resulting in a total of 30 participants in these analyses.

[2] Huberty and Morris (1989) describe four specific situations in which "the multiple ANOVAs approach may be appropriate" (p. 303). The first sand second situations they list apply to the current research. In the first case, the outcome variables of PISE and media comfort are conceptually independent. That is, each aspect of self-efficacy is being conceptualized and measured separately, which warrants the multiple ANOVA approach. Secondly, this research tests the impact of self-efficacy on expectancy effects, which is a new, exploratory line of research. As Huberty and Morris state: "A second situation in which multiple univariate analyses might be appropriate is when the research being conducted is exploratory in nature. Such situations would exist when new treatment and outcome variables are being studied, and the effects of the former on the latter are being investigated as to reach some tentative, nonconfirmatory conclusions" (p. 303).

[3] The linear-mixed modeling (MIXED) procedure allows for the analysis of both fixed (i.e., categorical) and random (i.e., subject) factors. The MIXED procedure allows the researcher to estimate the both types of effects in a single model (SPSS, n.d.).

Table 1

H1a & H1b: Behavioral Judgments of Mood versus Personality Expectancies in CMC

Hypothesis	Dependent Measure	*F (1, 38)*	*p*	η^2	Expectation	*M*	*SD*
H1a	Judge Ratings of Expector Social Attractiveness	32.78	.001	.44	Personality	3.19	0.20
					Mood	4.79	0.20
H1a	Judge Ratings of Expector Sociability	9.63	.004	.20	Personality	4.57	0.18
					Mood	5.34	0.18
H1a	Judge Ratings of Expector Extraversion	1.67	.20	.04	Personality	4.92	0.18
					Mood	5.25	0.18
H1b	Judge Ratings of Target Social Attractiveness	13.73	.001	.25	Personality	3.94	0.19
					Mood	4.92	0.19
H1b	Judge Ratings of Target Sociability	3.26	.08	.08	Personality	4.91	0.13
					Mood	5.24	0.13
H1b	Judge Ratings of Target Extraversion	3.47	.07	.08	Personality	4.92	0.14
					Mood	5.29	0.14

Table 2

H2a & H2b: Behavioral Judgments of Mood versus Personality Expectancies in Voice

Hypothesis	Dependent Measure	*F (1, 36)*	*p*	η^2	Expectation	*M*	*SD*
H2a	Judge Ratings of Expector Social Attractiveness	8.57	.006	.19	Personality	3.93	0.24
					Mood	4.85	0.24
H2a	Judge Ratings of Expector Sociability	5.57	.02	.13	Personality	4.75	0.16
					Mood	5.26	0.16
H2a	Judge Ratings of Expector Extraversion	12.24	.001	.25	Personality	4.53	0.17
					Mood	5.26	0.17
H2b	Judge Ratings of Target Social Attractiveness	6.16	.02	.14	Personality	4.19	0.23
					Mood	5.00	0.23
H2b	Judge Ratings of Target Sociability	7.80	.008	.17	Personality	4.75	0.16
					Mood	5.39	0.16
H2b	Judge Ratings of Target Extraversion	9.72	.004	.19	Personality	4.56	0.19
					Mood	5.34	0.19

Table 3

H3: Expectors' Post-Discussion Perceptions of Targets Across Voice and CMC Within Mood Expectancy

Hypothesis	Dependent Measure	*F (1, 38)*	*p*	Channel	*M*	*SD*
H3	Expector ratings of Target Social Attractiveness	0.13	.73	Voice	5.54	0.18
				CMC	5.30	0.18
H3	Expector ratings of Target Sociability	0.57	.46	Voice	5.91	0.15
				CMC	6.08	0.15
H3	Expector ratings of Target Extraversion	2.26	.14	Voice	4.93	0.21
				CMC	5.30	0.21

Table 4

Means for Judges' Ratings of Expector Behavior by Expectancy and Channel at Each Level of Expectors' Self-Reported Partner Influence Self-Efficacy

			Expectors' level of partner influence self-efficacy						
Dependent Measure	Channel	Expectancy	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Social Attractiveness	Voice	Personality	2.53	2.80	3.07	3.33	3.60	3.87	4.13
		Mood	3.77	4.03	4.30	4.57	4.83	5.10	5.37
Sociability	Voice	Personality	3.04	3.40	3.82	4.23	4.61	5.00	5.39
		Mood	4.80	4.90	4.99	5.08	5.18	5.26	5.65
Extraversion	Voice	Personality	1.82	2.43	3.05	3.66	4.27	4.88	5.49
		Mood	6.67	6.39	6.12	5.84	5.57	5.29	5.02
Social Attractiveness	CMC	Personality	2.53	2.79	3.06	3.33	3.60	3.86	4.13
		Mood	3.77	4.03	4.30	4.56	4.83	5.10	5.36
Sociability	CMC	Personality	3.30	3.69	4.08	4.47	4.87	5.26	5.65
		Mood	5.06	5.16	5.25	5.34	5.44	5.52	5.62
Extraversion	CMC	Personality	4.83	4.85	4.89	4.92	4.95	4.98	5.01
		Mood	4.64	4.83	5.03	5.22	5.41	5.61	5.80

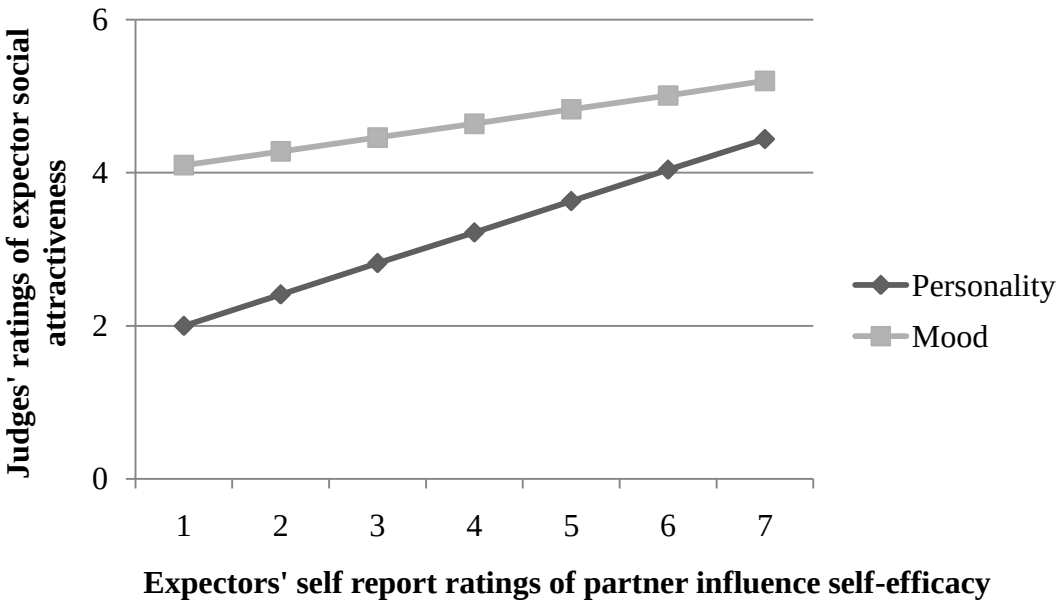

Figure 1. Means of judges' ratings on expectors' social attractiveness by expectancy type at each level of expectors' partner influence self-efficacy.

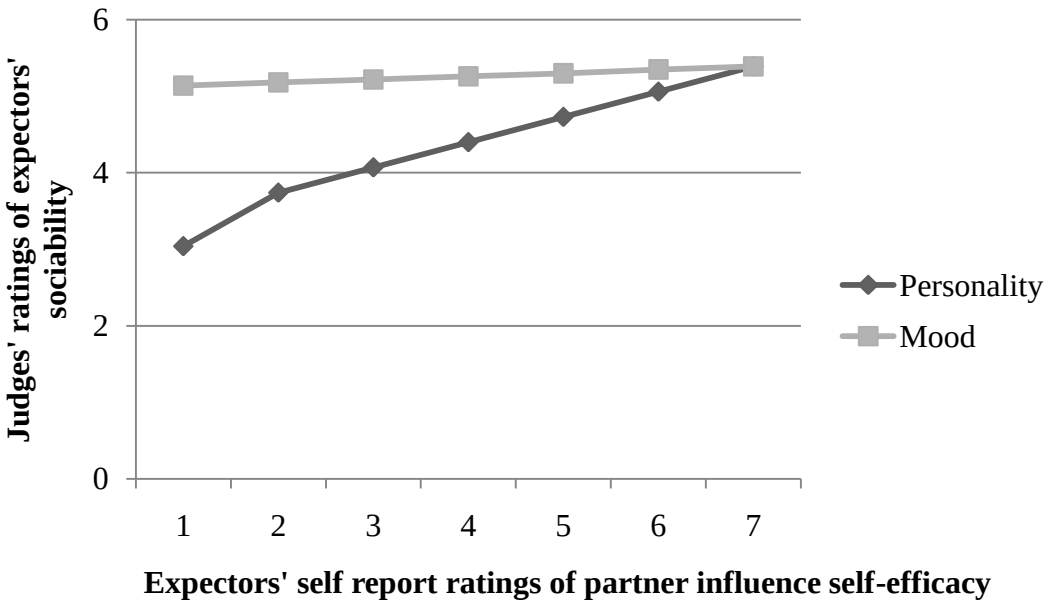

Figure 2. Means of judges ratings on expectors' sociability by expectancy at each level of expectors' partner influence self-efficacy.

Table 5

Means of target behavior by expectancy and channel at each level of expectors' self-reported level of partner influence self-efficacy.

			Expectors' level of partner influence self-efficacy						
Dependent Measure	Channel	Expectancy	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Social Attractiveness	Voice	Personality	3.23	3.45	3.68	3.90	4.12	4.34	4.56
		Mood	4.32	4.46	4.61	4.75	4.90	5.04	5.20
Sociability	Voice	Personality	3.78	4.01	4.23	4.46	4.68	4.91	5.13
		Mood	6.09	5.94	5.79	5.60	5.49	5.34	5.20
Extraversion	Voice	Personality	4.19	4.27	4.36	4.45	4.54	4.62	4.71
		Mood	4.93	5.02	5.11	5.20	5.28	5.37	5.46
Social Attractiveness	CMC	Personality	3.45	3.60	3.75	3.90	4.06	4.21	4.36
		Mood	4.68	4.76	4.83	4.90	4.97	5.05	5.12
Sociability	CMC	Personality	3.92	4.23	4.54	4.85	5.15	5.46	5.76
		Mood	5.46	5.39	5.32	5.25	5.20	5.12	5.05
Extraversion	CMC	Personality	4.81	4.85	4.88	4.91	4.94	4.98	5.01
		Mood	5.18	5.21	5.25	5.28	5.31	5.35	5.38

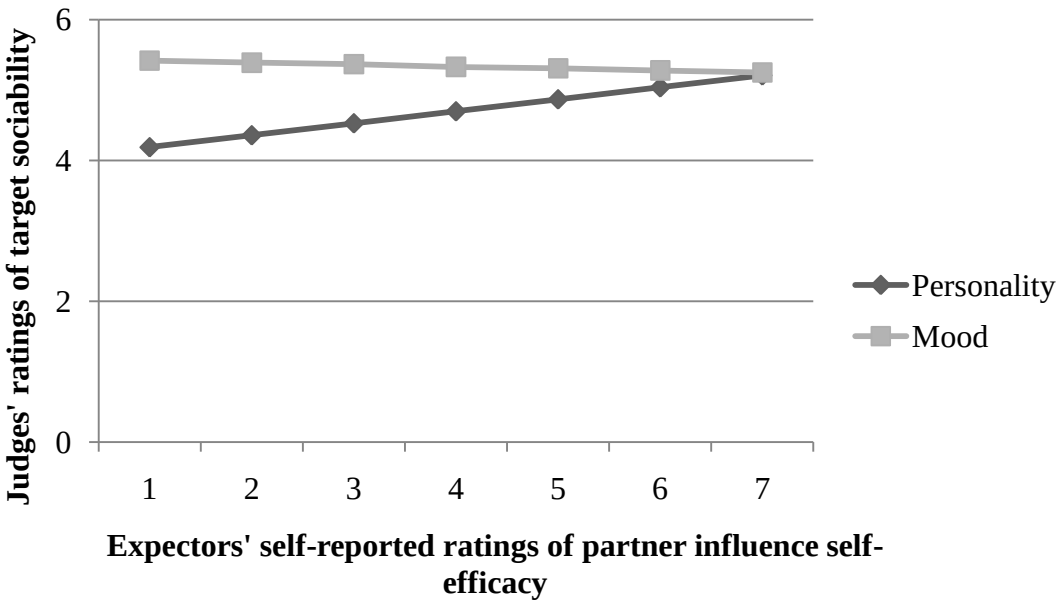

Figure 3. Means of judges ratings of target sociability by expectancy type at each level of expectors' partner influence self-efficacy.

Table 6

Means of target behavior by expectancy and channel at each level of expectors' self-reported level of media comfort.

			Expectors' level of media comfort						
Dependent Measure	Channel	Expectancy	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Social Attractiveness	Voice	Personality	2.66	3.02	3.38	3.74	4.09	4.45	4.81
		Mood	5.25	5.20	5.15	5.10	5.06	5.01	4.96
Sociability	Voice	Personality	3.75	4.00	4.22	4.46	4.69	4.92	5.18
		Mood	6.32	6.13	5.94	5.76	5.57	5.39	5.20
Extraversion	Voice	Personality	3.67	3.89	4.09	4.30	4.51	4.71	4.92
		Mood	5.89	5.79	5.68	5.57	5.46	5.35	5.24
Social Attractiveness	CMC	Personality	2.28	2.64	3.00	3.36	3.72	4.08	4.44
		Mood	5.12	5.07	5.03	4.98	4.93	4.89	4.84
Sociability	CMC	Personality	3.12	3.51	3.90	4.29	4.68	5.07	5.45
		Mood	5.38	5.35	5.32	5.30	5.25	5.22	5.20
Extraversion	CMC	Personality	3.65	3.93	4.20	4.48	4.75	5.03	5.30
		Mood	5.47	5.43	5.39	5.34	5.30	5.28	5.21

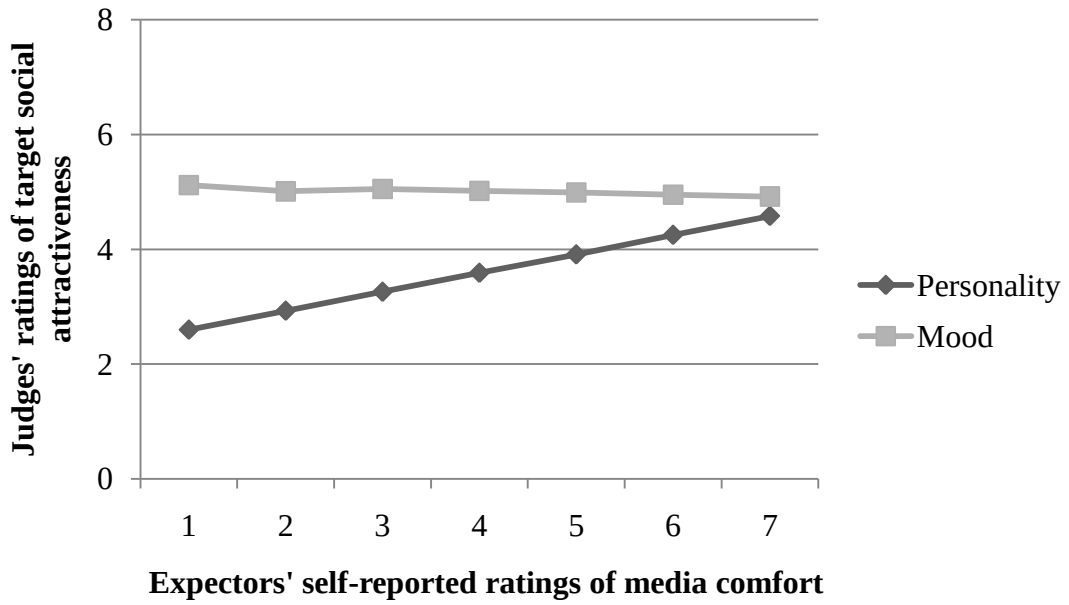

Figure 4. Means of judges ratings of target social attractiveness by expectancy type at each level of expectors' media comfort.

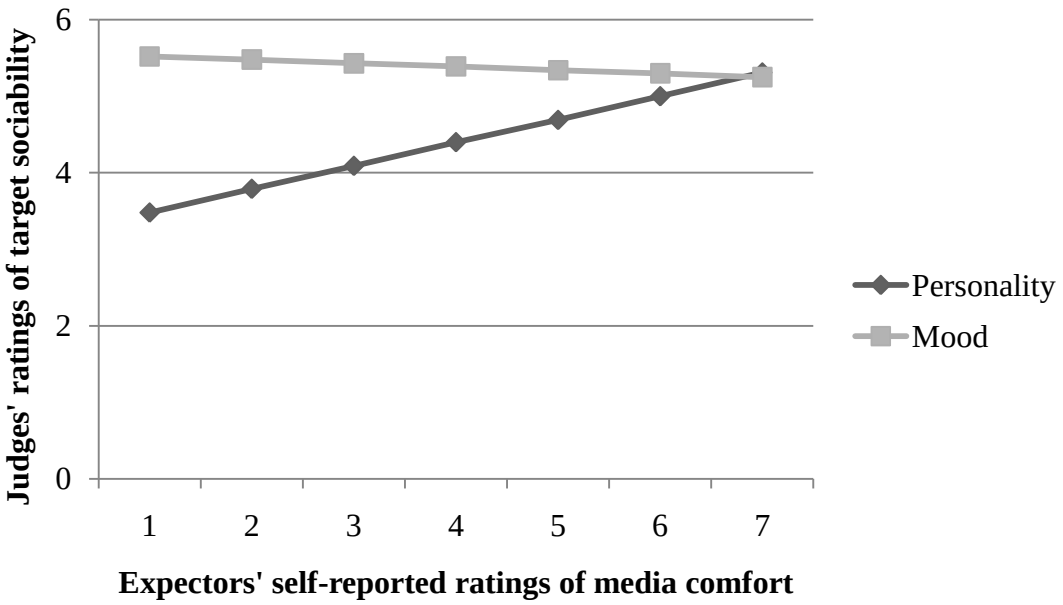

Figure 5. Means of judges ratings of target sociability by expectancy type at each level of expectors' media comfort.

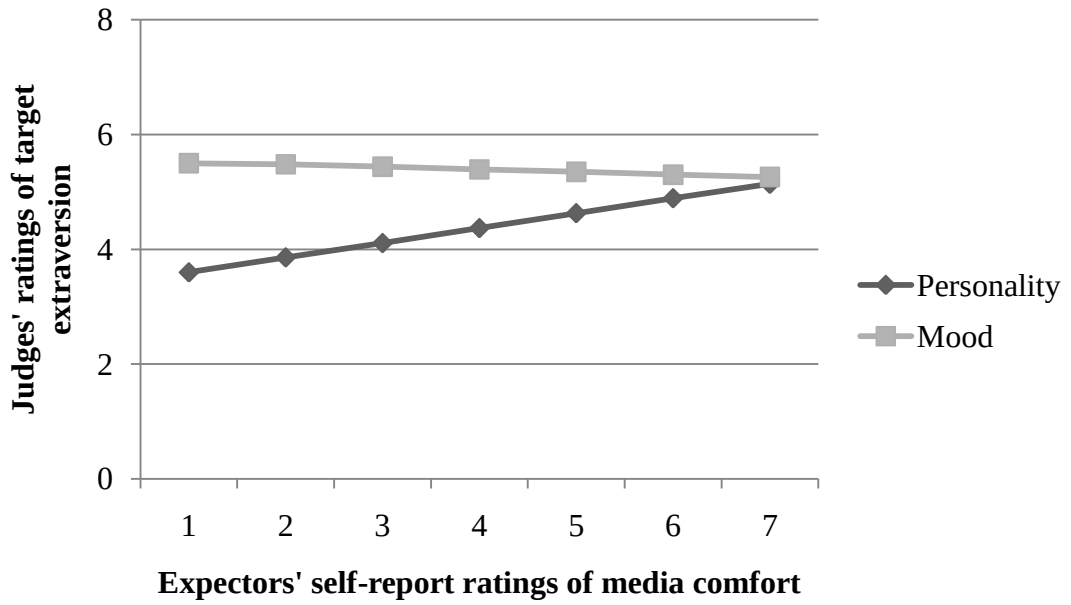

Figure 6. Means of judges ratings of target extraversion by expectancy type at each level of expectors' media comfort.

Table 7

Means of expectors' post-chat ratings of target by expectancy and channel at each level of expectors' self-reported level of partner influence self-efficacy.

			Expectors' level of partner influence self-efficacy						
Dependent Measure	Channel	Expectancy	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Social Attractiveness	Voice	Personality	3.52	3.84	4.17	4.49	4.81	5.13	5.46
		Mood	4.06	4.38	4.70	5.02	5.35	5.67	5.99
Sociability	Voice	Personality	5.41	5.40	5.40	5.40	5.40	5.40	5.40
		Mood	5.35	5.48	5.61	5.73	5.88	6.01	6.14
Extraversion	Voice	Personality	4.25	4.29	4.32	4.36	4.40	4.44	4.47
		Mood	3.95	4.19	4.41	4.65	4.89	5.12	5.35
Social Attractiveness	CMC	Personality	6.35	6.03	5.70	5.38	5.06	4.73	4.41
		Mood	6.72	6.39	6.07	5.75	5.42	5.10	4.78
Sociability	CMC	Personality	6.68	6.36	6.04	5.71	5.39	5.07	4.74
		Mood	6.63	6.44	6.25	6.05	5.86	5.67	5.48
Extraversion	CMC	Personality	5.97	5.61	5.27	4.91	4.56	4.21	3.85
		Mood	5.66	5.51	5.35	5.20	5.04	4.89	4.73

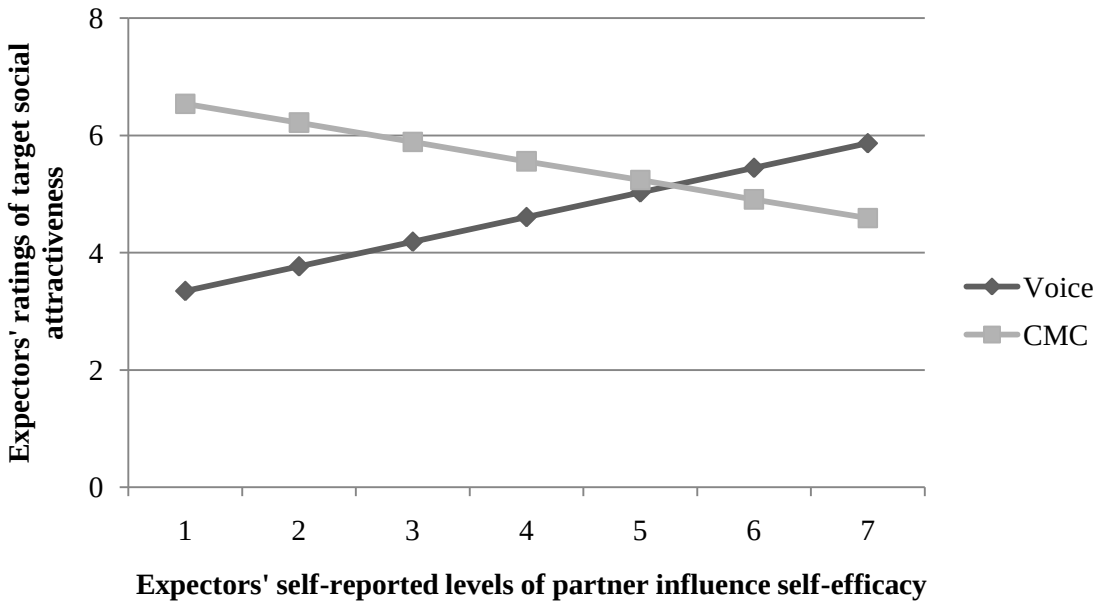

Figure 7. Expectors' post-chat ratings of targets' social attractiveness by channel type at each level of expectors' partner influence self-efficacy.

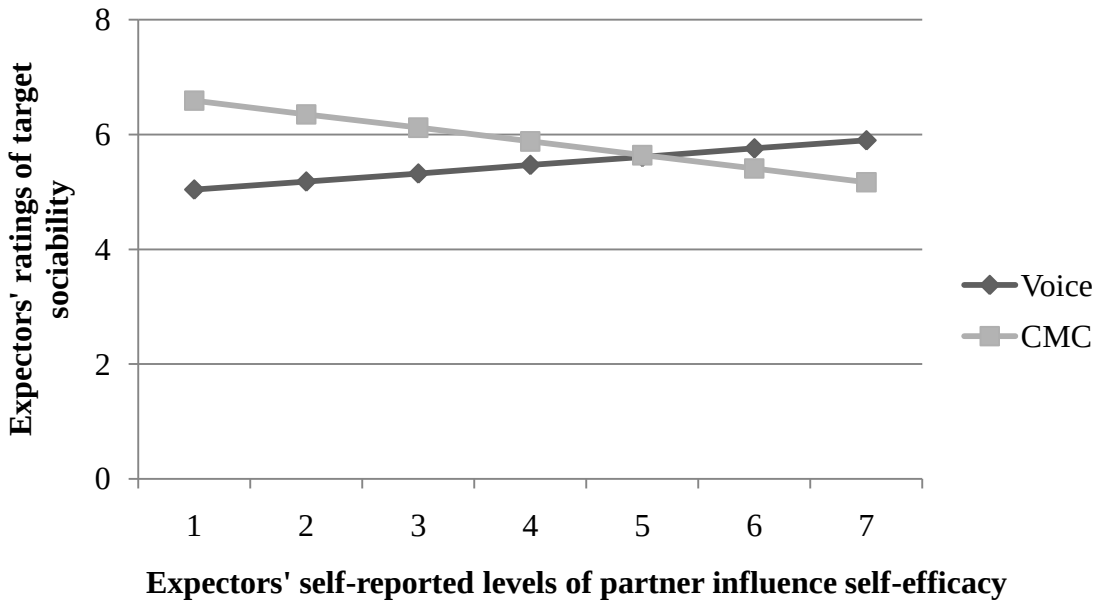

Figure 8. Expectors' post-chat ratings of targets' sociability by channel type at each level of expectors' partner influence self-efficacy.

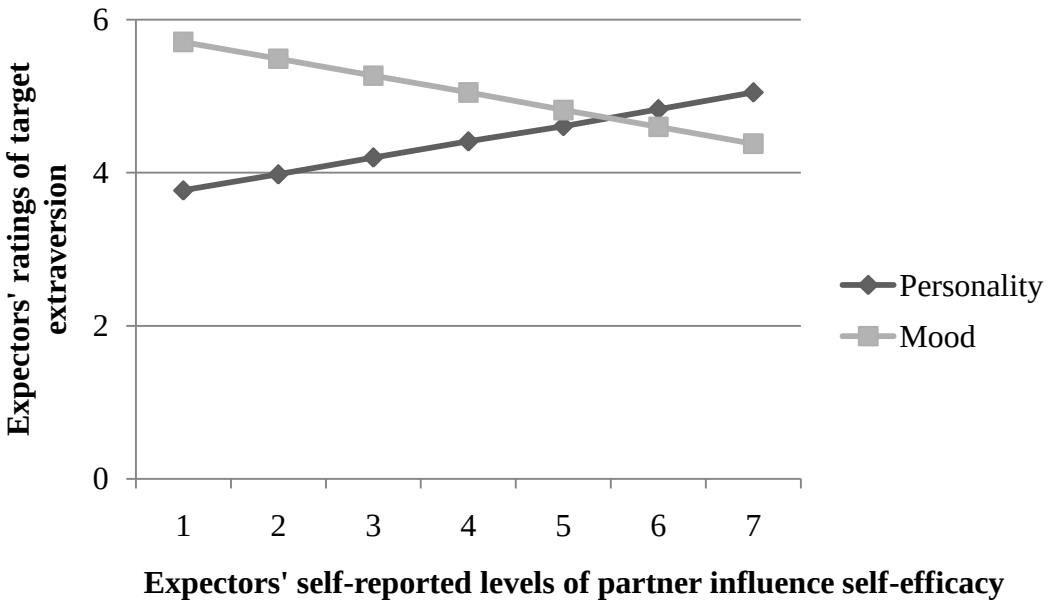

Figure 9. Expectors' post-chat ratings of targets' extraversion by channel type at each level of expectors' partner influence self-efficacy.

Table 8

H7b. Expectors' post-chat ratings of targets by expectancy type and channel type at each level of expectors' media comfort

			Expectors' level of media comfort						
Dependent Measure	Channel	Expectancy	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Social Attractiveness	Voice	Personality	2.92	3.39	3.85	4.32	4.79	5.26	5.72
		Mood	4.34	4.59	4.83	5.08	5.33	5.58	5.82
Sociability	Voice	Personality	5.00	5.12	5.23	5.32	5.43	5.54	5.65
		Mood	5.62	5.68	5.74	5.80	5.86	5.92	5.97
Extraversion	Voice	Personality	3.59	3.81	4.03	4.26	4.48	4.70	4.92
		Mood	3.24	3.57	3.91	4.24	4.58	4.91	5.25
Social Attractiveness	CMC	Personality	5.56	5.50	5.45	5.40	5.34	5.29	5.24
		Mood	6.88	6.60	6.33	6.06	5.79	5.51	5.24
Sociability	CMC	Personality	6.01	5.92	5.83	5.74	5.64	5.55	5.46
		Mood	6.69	6.54	6.41	6.27	6.12	5.99	5.84
Extraversion	CMC	Personality	5.98	5.70	5.43	5.15	4.87	4.59	4.32
		Mood	6.01	5.85	5.68	5.52	5.36	5.19	5.01

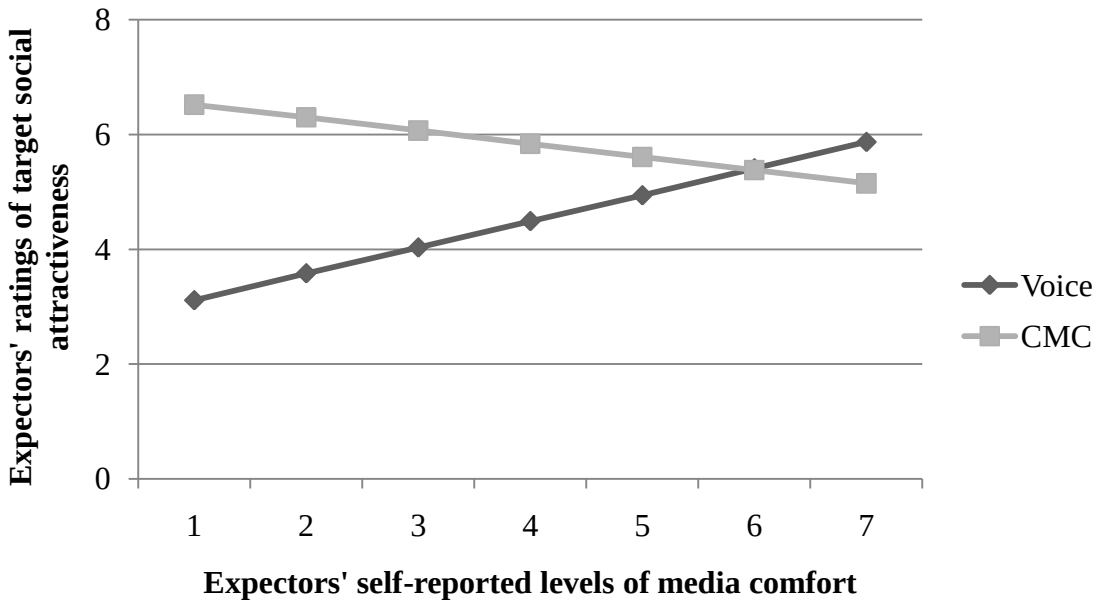

Figure 10. Expectors' post-chat ratings of targets' social attractiveness by channel type at each level of expectors' media comfort.

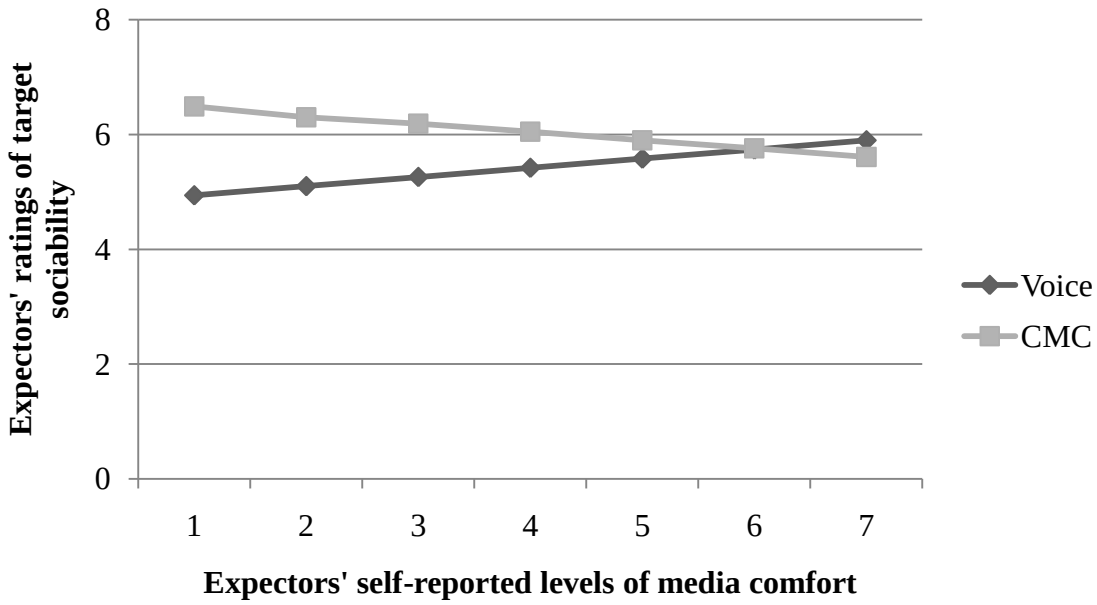

Figure 11. Expectors' post-chat ratings of targets' sociability by channel type at each level of expectors' media comfort.

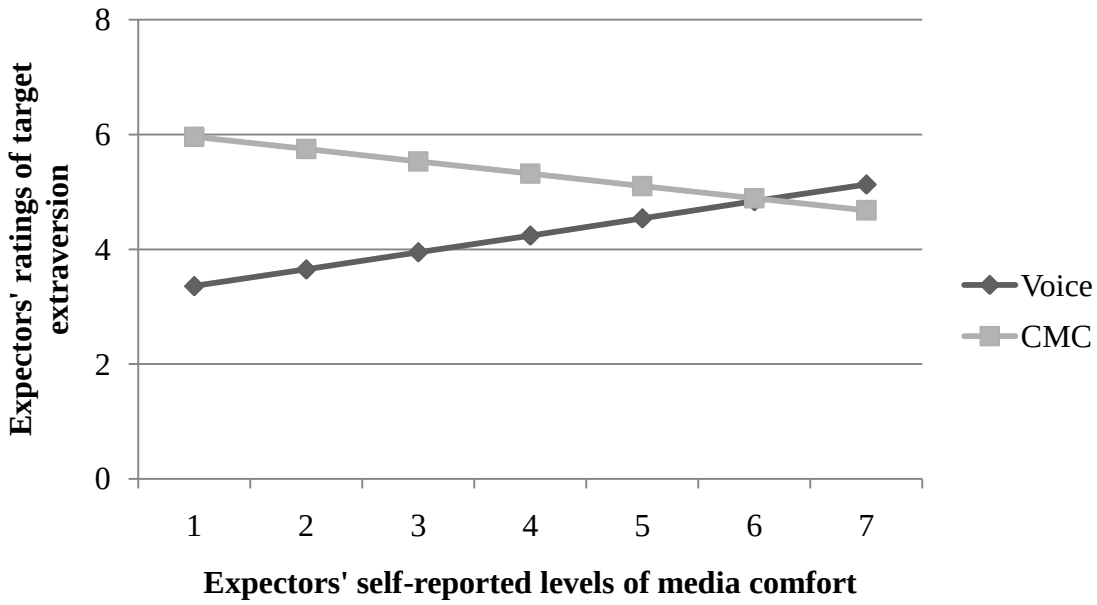

Figure 12. Expectors' post-chat ratings of targets' extraversion by channel type at each level of expectors' media comfort.

APPENDICES

Appendix A

Table A1

Post-Test Measures

Scale	Items	Expectors	Targets
Valence	crabby/ jolly, irritable/ agreeable, cranky/pleasant, kind/prickly, sad/happy, nice/ awful, grumpy/ perky, easy-going/ difficult, joyful/miserable	*M* = 5.57 *SD* = 0.65 α = .89	*M* = 5.83 *SD* = 0.77 α = .91
Social Attractiveness	This person just wouldn't fit into my circle of friends (reverse coded); We could never establish a personal friendship with each other (reversed coded); It would be difficult to meet and talk with this person (reverse coded); I think this person could be a friend of mine	*M* = 5.31 *SD* = 0.85 α = .76	*M* = 5.04 *SD* = 0.97 α =.76
Sociability	friendly/ unfriendly, sociable/ unsociable, negativistic/ cooperativistic, sympathetic/ unsympathetic, good-natured/ irritable	*M* = 5.63 *SD* = 0.69 α = .81	*M* = 5.79 *SD* = 0.84 α = .85
Extraversion	extraverted/introverted, talkative/silent, timid/ bold, energetic/ tired, quiet/ verbal	*M* = 4.70 *SD* = 0.85 α = .80	*M* = 5.04 *SD* = 1.15 α = .88

Appendix B

Table B1

Self-efficacy Items for Dyads Using CMC

Scale	Items	Descriptive Statistics
Partner Influence Self-efficacy	I find myself to be persuasive when using online chat When people are feeling down, I can cheer them up easily online It is easy to change others' behavior when I'm online Influencing or persuading others is easy to do in online chat I can affect people's moods through my online messages Changing someone's mood through online chat is easy for me	Expectors *M* = 4.22 *SD* =1.24 α = .91
		Targets *M* = 4.35 *SD* =1.17 α = .89
Comfort and Confidence with Medium	I feel very comfortable using online chat I feel it easy to express myself in chat I feel confident using online chat to communicate with people I am very expressive in online chat conversations I feel confident about my written communication	Expectors *M* = 5.39 *SD* =1.35 α = .92
		Targets *M* = 5.48 *SD* =1.27 α = .92
Self-Efficacy with Self-Presentation	I have greater control over how others perceive me in online chat than I do in phone calls Overall, my ability to present myself to others is better online than on the phone.	Expectors *M* = 3.58 *SD* = 1.67 α = .68
		Targets *M* =3.57 *SD* = 1.58 α = .62

Table B2

Self-efficacy Items for Dyads Using Audio/voice Channels

Scale	Items	Descriptive Statistics
Partner Influence Self-efficacy	I find myself to be persuasive when I speak to others. When people are feeling down, I can cheer them up easily by speaking with them. It is easy to change others people's behavior through oral communication. Influencing or persuading others is easy to do in spoken messages. I can affect people's moods through my oral communication. Changing someone's mood when through spoken communication is easy for me.	Expectors *M* = 5.54 *SD* =0.78 α = .80 Targets *M* = 5.39 *SD* =1.11 α = .91
Comfort and Confidence with Medium	I feel very comfortable using spoken communication I feel it easy to express myself when I speak to others I feel confident using oral/ vocal messages to communicate with people I am very expressive in my spoken conversations I feel confident about my oral communication	Expectors *M* = 5.68 *SD* =1.06 α = .93 Targets *M* = 5.70 *SD* = 0.88 α = .85
Self-Efficacy with Self-Presentation	I don't worry about how I sound or appear to others in an online chat compared to phone calls (rc). I have greater control over how others perceive me in phone calls than I do in online chat Overall, my ability to present myself to others is better on the phone than online.	Expectors *M* = 3.15 *SD* = 1.32 α = .42 Targets *M* = 3.75 *SD* = 1.67 α = .54

Appendix C

Table C1

Inter-Rater Reliability, Inter-Item Reliability, and Descriptive Statistics for Outside Judges' Ratings of Expector Behavior

Dimension	Medium	Inter-Item Reliability	Inter-Rater Reliability	Descriptive Statistics
Social Attractiveness	CMC	α = .95	α = .86	*M* = 4.02, *SD* =1.20
	Voice	α = .94	α = .98	*M* = 4.39, *SD* =1.09
Sociability	CMC	α = .93	α = .93	*M* = 4.96, *SD* = 0.86
	Voice	α = .91	α = .95	*M* = 5.01, *SD* = 0.71
Extraversion	CMC	α = .96	α = .93	*M* = 5.09, *SD* = 0.81
	Voice	α = .95	α = .96	*M* = 4.95, *SD* = 1.08

Table C2

Inter-Rater Reliability, Inter-Item Reliability, and Descriptive Statistics for Outside Judges' Ratings of Target Behavior

Dimension	Medium	Inter-Item Reliability	Inter-Rater Reliability	Descriptive Statistics
Social Attractiveness	CMC	α = .97	α = .81	*M* = 4.46, *SD* =0.97
	Voice	α = .99	α = .92	*M* = 4.58, *SD* = 0.90
Sociability	CMC	α = .96	α = .89	*M* = 5.07, *SD* = 0.58
	Voice	α = .98	α = .94	*M* = 5.06, *SD* = 0.77
Extraversion	CMC	α = .96	α = .91	*M* = 5.07, *SD* = 0.63
	Voice	α = .98	α = .95	*M* = 4.94, *SD* = 0.90

Appendix D

Table D1

Summary of Correlations for Expectors' Post-Discussion Ratings of Targets, Behavioral Ratings of Expectors, and Expectors' Self-Efficacy in Voice

Dependent Measure	1	2	3	4	5	6	7
1. Expectors' Ratings of Target Social Attractiveness							
2. Expectors' Ratings of Target Sociability	.51**						
3. Expectors' Ratings of Target Extraversion	.45**	.65*					
4. Judges' Ratings of Expector Social Attractiveness	.32	.19	.38*				
5. Judges' Ratings of Expector Sociability	.33*	.31	.31	.81**			
6. Judges' Ratings of Expector Extraversion	.43**	.32	.34*	.82**	.83**		
7. Expector Media Self-Efficacy	.49**	.25	.38	.28	.22*	.34*	
8. Expector PISE	.33*	.16	.20	.35*	.30	.34*	.70**

* $p = .05$, ** $p = .01$ (two-tailed).

Table D2

Summary of Correlations for Expectors' Post-Discussion Ratings of Targets, Behavioral Ratings of Expectors, and Expectors' Self-Efficacy in CMC

Dependent Measure	1	2	3	4	5	6	7
1. Expectors' Ratings of Target Social Attractiveness							
2. Expectors' Ratings of Target Sociability	.44**						
3. Expectors' Ratings of Target Extraversion	.28*	.80**					
4. Judges' Ratings of Expector Social Attractiveness	.18	.20	.20				
5. Judges' Ratings of Expector Sociability	-.03	-.17	-.05	.70**			
6. Judges' Ratings of Expector Extraversion	.08	-.25	-.20	.34*	.25		
7. Expector Media Self-Efficacy	-.34*	-.27	-.32*	.07	.11	.14	
8. Expector PISE	-.48**	-.43**	-.36*	.27	.31	.27	.58**

* $p = .05$, ** $p = .01$ (two-tailed).

Appendix E

Table E1

Ickes et al. (1982) Replication of Perceptual Effects: Expectors' Post-Discussion Ratings of Target

Dependent Measure	Channel	Expectancy		
		No-expectancy Control	Negative Personality	Negative Mood
Expector rating of Target social attractiveness	Voice	5.37 (0.60)	5.16 (1.13)	5.85 (0.84)
Expector rating of Target sociability	Voice	4.90_{a} (0.25)	5.46_{ab} (0.38)	6.04_{b} (0.72)
Expector rating of Target extraversion	Voice	4.68 (1.08)	4.72 (0.50)	4.98 (1.00)

Note. n = 30. Means with different subscripts indicate that the difference between means is significant at p = .05.

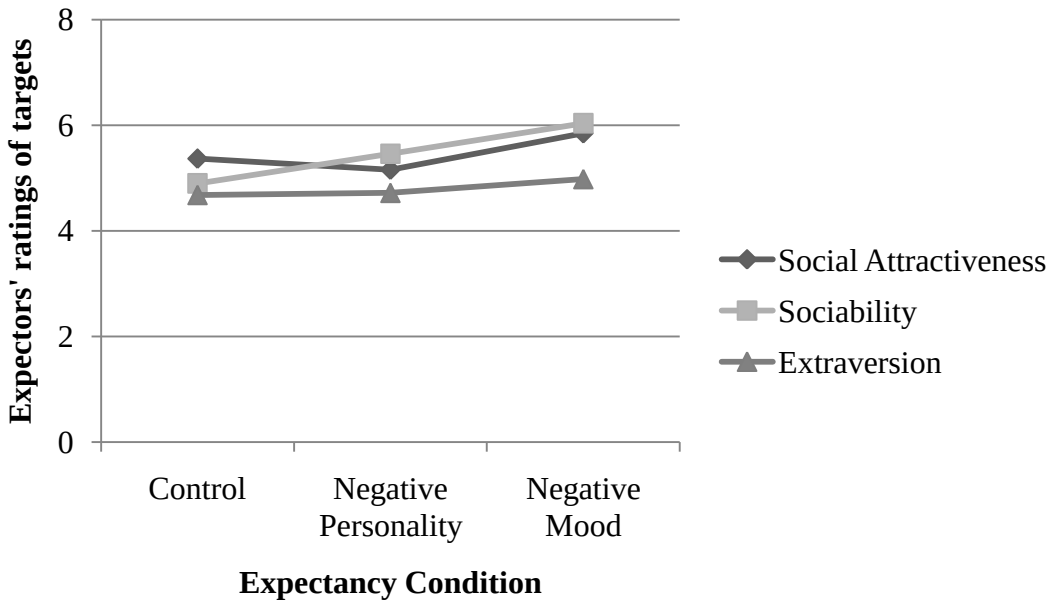

Figure E1. Expectors' post-discussion perceptual evaluations of targets in audio/voice by expectancy condition.

Table E2

Tong (2011) Replication of Perceptual Effects: Expectors' Post-Chat Ratings of Target

Dependent Measure	Channel	Expectancy		
		No-expectancy Control	Negative Personality	Negative Mood
Expector rating of Target social attractiveness	CMC	4.83_{a} (1.31)	4.95_{ab} (0.92)	6.10_{b} (0.93)
Expector rating of Target sociability	CMC	5.24_{a} (0.82)	5.14_{a} (0.82)	6.37_{b} (0.54)
Expector rating of Target extraversion	CMC	4.14_{a} (1.91)	4.24_{ab} (1.11)	5.50_{b} (0.75)

Note. n = 30. Means with different subscripts indicate that the difference between means is significant at p = .05.

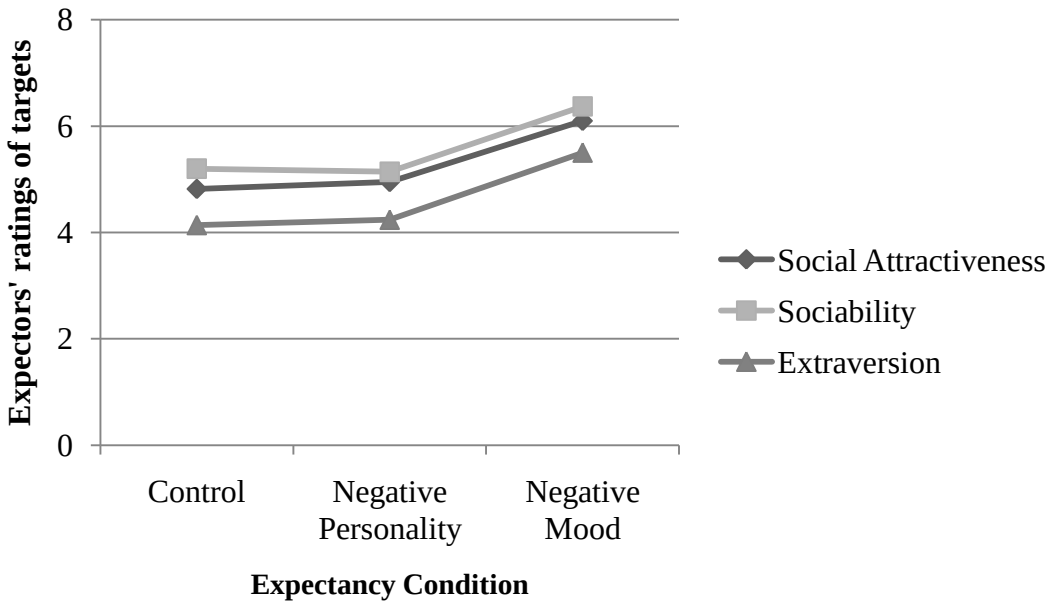

Figure E2. Expectors' post-discussion evaluations of targets in CMC chat by expectancy condition.

Appendix F

Table F1

List of Hypotheses and Results

Hypothesis	*Prediction*	*Independent Variables*	*Dependent Variables*	*Results*
H1a	Behavioral disconfirmation of expectors in CMC	Stable personality; Malleable mood	Judges' behavioral ratings of expectors	Supported
H1b	Behavioral disconfirmation of targets in CMC	Stable personality; Malleable mood	Judges' behavioral ratings of targets	Supported
H2a	Behavioral disconfirmation of expectors in audio/voice	Stable personality; Malleable mood	Judges' behavioral ratings of expectors	Supported
H2b	Behavioral disconfirmation of targets in audio/voice	Stable personality; Malleable mood	Judges' behavioral ratings of targets	Supported
H3	Perceptual confirmation in audio/voice; Perceptual disconfirmation in CMC	CMC; Voice	Expectors' post-discussion ratings of targets	Not Supported
H3 (Voice)	Perceptual confirmation in voice	Stable personality; Malleable mood; No-expectancy control	Expectors' post-discussion ratings of targets	Partially supported
H3 (CMC)	Perceptual disconfirmation in CMC	Stable personality; Malleable mood; No-expectancy control	Expectors' post-discussion ratings of targets	Supported
H4a	Differences in channel and expectancy affect expectors' PISE	CMC; Voice Stable personality; Malleable mood	Expectors' ratings of PISE	Supported
H4b	Differences in channel and expectancy affect expectors' media comfort	Media comfort; CMC; Voice Stable personality; Malleable mood	Expectors' ratings of media comfort	Not Supported
H5a	Differences in expectors' level of PISE moderate the effects of expectancy and channel on expectors' behaviors.	PISE; Stable personality; malleable mood; CMC; Voice	Judges' behavioral ratings of expectors extraversion	Partially supported

Table F1 (Cont'd)

H5b	Differences in expectors' level of media self-efficacy moderate the effects of expectancy and channel on expectors' behaviors.	Media self-efficacy; Stable personality; malleable mood; CMC; Voice	Judges' behavioral ratings of expectors	Not supported
H6a	Differences in expectors' level of PISE moderate the effects of expectancy and channel on targets' behaviors.	PISE; Stable personality; malleable mood; CMC; Voice	Judges' behavioral ratings of targets	Partially supported
H6b	Differences in expectors' level of media comfort moderate the effects of expectancy and channel on targets' behaviors.	Media comfort; Stable personality; malleable mood; CMC; Voice	Judges' behavioral ratings of targets	Supported
H7a	Differences in expectors' level of PISE moderate the effects of expectancy and channel on expectors' post-discussion evaluations of targets.	PISE; Stable personality; malleable mood; CMC; Voice	Expectors' post-discussion ratings of targets	Supported
H7b	Differences in expectors' level of media comfort moderate the effects of expectancy and channel on expectors' post-discussion evaluations of targets.	Media comfort; Stable personality; malleable mood; CMC; Voice	Expectors' post-discussion ratings of targets	Supported

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