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# Impression Management and Leadership Emergence in Virtual Settings:The Role of Gender and Media

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**Abstract**

This paper describes a theoretical model that articulates how members of virtual teams engage in various impression management behaviors to influence their peers' assessment of them as leaders. Given that previous research has indicated that men and women engage in different impression management behaviors and that settings differ with respect to the degree of technological capabilities, our model includes these nuances. Specifically, we adapted the literature associated with impression management to investigate: (a) the efficacy of two key impression management behaviors-self promotion (an aggressive strategy) and supplication (a passive strategy)-that males and females engage in, in their quest to be perceived as leaders by members of their virtual team; (b) whether the extent of different technological capabilities affects this relationship; and (c) whether the strength of the aforementioned relationship changes over time. Our theoretical model offers three interesting implications: First, successful impression management strategies (i.e., those that help establish leadership) in very virtual settings are likely to differ from those in less virtual settings. Second, initial impressions are presumed to matter. Once impressions are formed they are unlikely to change in the short term. They may change over the longer term, as groups build a history of interactions and performance, but those changes are likely to be slow. Third, greater use of technological capabilities, we argue, offers minority members (women, typically) the freedom to break out of gender-stereotypical impression management strategies and establish themselves as leaders without facing potential backlashes (in contrast to settings that are less virtual).

**Keywords:** Gender, Impression Management, Self-Promotion, Supplication, Leadership Emergence, Time, Technological capabilities

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## The Role of Gender and Media

**ABSTRACT**

This paper describes a theoretical model that articulates how members of virtual teams engage in various impression management behaviors to influence their peers' assessment of them as leaders. Given that previous research has indicated that men and women engage in different impression management behaviors and that settings differ with respect to the degree of technological capabilities, our model includes these nuances. Specifically, we adapted the literature associated with impression management to investigate: (a) the efficacy of two key impression management behaviors—self-promotion (an aggressive strategy) and supplication (a passive strategy)—that males and females engage in, in their quest to be perceived as leaders by members of their virtual team; (b) whether the extent of different technological capabilities affects this relationship; and (c) whether the strength of the aforementioned relationship changes over time.

Our theoretical model offers three interesting implications: *First,* successful impression management strategies (i.e., those that help establish leadership) in very virtual settings are likely to differ from those in less virtual settings. *Second,* initial impressions are presumed to matter. Once impressions are formed they are unlikely to change in the short term. They may change over the longer term, as groups build a history of interactions and performance, but those changes are likely to be slow. *Third,* greater use of technological capabilities, we argue, offers minority members (women, typically) the freedom to break out of gender-stereotypical impression management strategies and establish themselves as leaders without facing potential backlashes (in contrast to settings that are less virtual).

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## 1. INTRODUCTION

Virtual teams are typically composed of geographically and organizationally dispersed members who collaborate on various projects using electronic collaboration tools. However, an understanding of how virtual teams work, especially in the area of leadership is limited. Much previous research has underscored the importance of understanding leaders, as leaders often wield extensive influence on group dynamics as well as group outcomes (Yoo & Alavi, 2004). The leadership literature has made a distinction between formal leaders and individuals who are perceived as leaders. The focus of this paper is on the latter form of leadership—emergent leadership—which views a leader as not being a "leader" unless perceived by others as such. Interestingly, gender has played a significant role in affecting the emergence of leaders. Ideally, a level-playing field should exist such that individuals are assessed based on their abilities or other leadership-related characteristics when they emerge as leaders. However, much research examined in a face-to-face setting has demonstrated that gender plays a key role in leadership emergence. For instance, women, despite possessing and displaying relevant expertise, are consistently not viewed as leaders (Watson & Hoffman, 2004).

Theorists and previous research have highlighted the vital role played by impression management strategies in influencing leadership emergence. Impression management strategies represent "a conscious or unconscious attempt to control images projected in real or imagined social interactions" (Schlenker, 1980; p. 44). The aim of impression management strategies is to project a desirable image to the audience so as to exert influence on group activities, to shape "the definition of the situation" (Goffman, 1959), norms (Bozeman & Kacmar, 1997) and behaviors (Bozeman & Kacmar, 1997);

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this in turn enables these "actors" to better achieve their ultimate desire (Jones & Pittman, 1982; Bozeman & Kacmar, 1997). In this paper, we are primarily interested in examining self-promotion and supplication impression management strategies as they are more congruent with characteristics associated with masculinity and femininity (Guadagno & Cialdini, 2007) respectively. Self-promotion relates to behaviors that individuals engage in so as to appear and convey competence, while supplication pertains to actions that individuals employ so as to appear humble and helpful (Sosik & Jung, 2003). Self-promotion is generally considered an aggressive strategy and supplication is deemed a passive one.

The purpose of this study is to discuss whether the impression management strategies of men and women working in environments with different types and degrees of technologies capabilities differ, and most importantly, whether such differential behaviors impact leadership emergence. Carte and Chidambaram (2004) argued that collaborative technologies can be considered a "bundle of capabilities" comprising two sets—reductive capabilities and additive capabilities (both of which are explained further later in the paper). The reductive capabilities, such as the reduction of visual cues, offered by electronic collaborative technologies (i.e., CMC) are particularly useful in reducing the salience of demographic characteristics early in the life of the group and hence, ameliorate the dysfunctional effects associated with diversity (e.g., gender). Indeed, there is much empirical support for their assertion (e.g., Staples & Zhao, 2006). Further, the additive capabilities, such as an electronic audit trail, enable one's efforts to be easily recognizable (Nemiro, 2002).

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In this paper, we argue that such technologies offer a more level-playing field for minority members, i.e., females. As such, we discuss the idea that, in a setting characterized by a high degree of reductive capabilities, females are not as obligated to engage in impression management strategies that are in line with femininity and are free to break away from gender stereotypes. While gender could be deemed as either psychological state or biological sex, this paper deems gender as a biological sex as is typically assumed in previous information systems research (Gefen & Straub, 1997; Venkatesh & Morris, 2000; Morris, Venkatesh & Ackerman, 2005). Despite the importance of impression management strategies in facilitating group work, promotions and likeability (Gardner & Avolio, 1998; Nguyen, Seers & Hartman, 2008), we know very little about the effects of these strategies on leadership emergence in contexts characterized by different degrees and types of technological capabilities as well as the extent to which such a relationship is affected by the temporal dimension. This paper attempts to fill this gap in the literature.

This article is organized as follows. Section 2 describes the pertinent literature of the proposed model described in this paper while section 3 presents the proposed hypotheses. We draw our arguments based on Theories of Social Role, Role Congruity, Attribution and Collaborative Technology Deployment. This paper will end by discussing implications of the proposed theory and the related research avenues.

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## 2. THEORY DEVELOPMENT AND HYPOTHESES

Figure 1 depicts our research model wherein technological capabilities and gender interact to influence impression management strategies, which in turn affects leadership emergence. A temporal element that affects the impact of impression management strategies on leadership emergence is also included. Below, we describe the model and its relationships in greater detail, review the relevant literature and present our hypotheses.
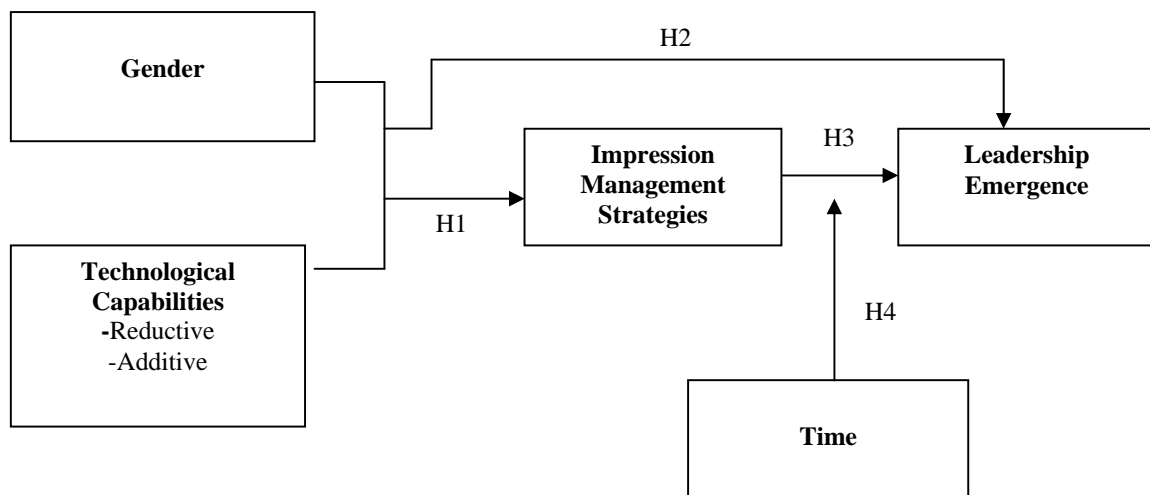


*Figure 1: Research Model*

### 2.1 Gender and impression management strategies

Impression management has received scholarly attention over the past five decades. In the classical work of Goffman (1959) who first conceptualized impression management, he proposed a dramaturgical model in which "actors" engage in various "performances" depending on the "settings" and the "audiences". Through the use of impression management tactics, individuals attempt to shape others' images of oneself (Goffman, 1959; Jones & Pittman, 1982) so as to better influence the situation (Goffman, 1959) and group dynamics (Bozeman & Kacmar, 1997).

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The use of impression management strategies, however, is not as straightforward as it seems. There are two sides of a coin to each impression management strategy—a desirable and an undesirable image (Jones & Pittman, 1982), which is further compounded by the gender factor, if present (Rudman, 1998; Turnley & Bolino, 2001). Scholars and studies in the impression management and HRM (Human Resource Management) arena have examined the impact of gender on the effectiveness of impression management strategies, but mostly in the context of interviews and job appraisals. However, scant attention is given to how impression management strategies (Nguyen et al., 2008) and gender interact in work teams.

When misalignment of impression management strategies occur (i.e., perceived masculine strategies used by females, for instance), it could have in negative social ramifications (Rudman, 1998). Negative ramifications could occur in the form of reduced likeability ratings, or reduced hireability. The study by Rudman (1998), for instance, supported this notion. Specifically, the study indicated that individuals whose behaviors were incompatible with gender prescribed roles were evaluated negatively and received a backlash effect. In another study, Watson and Hoffman (2004) found that females, despite demonstrating the required task expertise as their male counterparts, carry a risk of being labeled as "black sheep". The females in that study also received lower likeability ratings as compared to males. Bolino and Turnley (2003) found that females who employed aggressive strategies received lower ratings of likeability from their supervisors while for males, there was no such relationship. Further, the study revealed that for females, there was no impact of the use of aggressive strategies on performance ratings. In contrast, the use of such strategies by males had a positive influence on

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performance evaluations. Gardner et al. (1994) cited several studies in which females who complied with gender stereotyped roles received higher social ratings than those who did not. In short, given that self-promotion is more in line with a masculine orientation, the use of such a strategy may incur more penalty than benefits for females. In contrast, the use of supplication is more in line with feminine gender roles and has been helpful in previous studies establishing images of humility and modesty (Sosik & Jung, 2003; Guadagno & Cialdini, 2007) or helplessness (Turnley & Bolino, 2001).

The above empirical findings are supported by theoretical arguments as well. According to Social Role Theory, females are expected to display, fulfill and abide by the societal gender norms. Failure to do so may result in negative social ramifications such as reduced likeability or lowered social ratings (Eagly & Karau, 2002; Watson & Hoffman, 2004). Thus, individuals are presumed to carry mental models and preexisting beliefs concerning what are the appropriate and generally accepted behaviors for each gender (Ridgeway, 2001). These beliefs are imposed and shaped by society. Thus, individuals who display deviant gender stereotypic behaviors may face resistance or be evaluated negatively by their peers or supervisors (Rudman, 1998; Bolino & Turnley, 2003). According to the gender prescriptive, females are expected to adopt socio-emotional roles whereas males are expected to adopt task-instrumental roles (Berger et al., 1977; Ridgeway, 2001).

A recent qualitative review of gender differences with regards to impression management strategies revealed that females are more likely to employ more passive and feminine impression management tactics (e.g., modesty) while males tend to use more masculine and proactive impression management tactics (e.g., self-promotion) in

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organizations (Guadagno & Cialdini, 2007). The above discussion, thus, suggests that females may tend to employ less self-promotion, but more supplication tactics than males so as to conform to societal expectations.

## 2.2 Gender and leadership emergence

Emergent (i.e. informal) leaders are those who exert influence on others, but are not necessarily appointed formally or selected explicitly as leaders (Yoo & Alavi, 2004). Further, emergent leaders earn their status through the support and acknowledgements of the group (Yoo & Alavi, 2004). The individual who emerges as the leader is presumably the person most qualified to lead (Yoo & Alavi, 2004). One or more leaders may emerge as the project moves forward (Misiolek, & Heckman, 2005). The examination of phenomenon associated with leadership emergence is a crucial one given that an individual is not necessarily a leader unless others perceived him or her as one. According to Stroh, NorthCraft, and Neale (2002), there are three important criteria that predicts leadership emergence. *First,* informal leaders are likely to be those who drive the group towards goal accomplishment. These individuals are perceived by their members as having direct expertise or as having an influence on those who have the expertise. *Second,* informal leaders are deemed more visible in key group tasks and in group discussions. *Third,* informal leaders are perceived to contribute more of their time towards a group's task. In contrast, formal leaders are those with a formal appointment, and have the power and authority to exert influence and control resources (Yoo & Alavi, 2004).

Understanding the dynamics of emergent leaders is an important managerial issue given the increasing proliferation of self-managed work teams and the growing

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decentralization of organizations (Pescosolido, 2001). Although there is an abundance of research on leadership, much less is known concerning how individuals emerge as leaders in teams that have worked over a period of time (Neubert & Taggar, 2004). Further, with the influx of females into the work force, the gender composition of work teams has changed as well (Neubert & Taggar, 2004). Gender may, therefore, represent a crucial factor that influences the dynamics of leadership emergence (Neubert & Taggar, 2004; Eagly, 2007). In this paper, we are primarily interested in examining gender and leadership emergence. Leadership emergence, as defined in this paper, is the *extent* to which one is perceived as a leader by members of the team.

The phenomenon of gender has been studied by scholars of sociology, social psychology and organizational behavior for several decades. A predominant theme that emerges from gender findings is that males tend to emerge as leaders more often than females (Eagly & Karau, 1991).

Such findings could be explained by Role Congruity Theory (Eagly & Karau, 2002), which suggests that the need to fulfill gender stereotypical roles as well as leader roles creates two hurdles for females wanting to emerge as leaders or who currently hold leadership roles. *First*, leaders in task-oriented groups are expected to behave in a manner that is more consistent with characteristics associated with masculinity—behaviors that are in line with male stereotypic norms (e.g., demonstrating task competency, participating actively in group discussions)—and tend to assume a higher status (Ritter & Yoder, 2004). Thus, females tend to be perceived as having less potential in assuming the role of a leader and are evaluated more harshly when they take up the role of a leader.

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*Second*, females who fail to adopt gender stereotypic valued roles run the risk of incurring social disapproval by members (Rudman, 1998; Watson & Hoffman, 2004). Violations of gender stereotypic norms result in backlash from others, as recent studies have shown (Rudman, 1998; Watson & Hoffman, 2004). A recent study that examined gender and leadership emergence revealed that females, despite demonstrating the relevant task expertise and were deemed as task competent, failed to emerge as leaders and were not evaluated as favorably as their male counterparts (Watson & Hoffman, 2004). They received lower social and leadership ratings as compared to their male counterparts.

It is, therefore, not surprising that empirical evidence suggests that females tend to assume far fewer leadership roles compared to males (Ritter & Yoder, 2004). This phenomenon is also known as the "glass ceiling". Although recent trends suggest that the incompatibility between stereotypic gender norms and leader roles may be less salient (Eagly & Karau, 2002), prejudicial attitudes towards females holding leadership and authority roles still persist (Eagly, 2007).

## 2.3 The impact of communication media and gender

Collaborative technologies refer to a variety of electronic tools that are used by individuals to collaborate, communicate and coordinate their task activities. Examples of such tools include email, bulletin boards and group support systems. The advent of communication technologies has enabled members who are geographically dispersed and separated by time zone differences to collaborate on work and engage in discussion. Given the convenience and flexibility provided by collaborative technologies, managers are now able to establish teams made up of members who are cognitively diverse and

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who may be located in different parts of the globe. Subsequently, the use of virtual teams is becoming an increasingly common phenomenon in the organizational world (Griffith, Sawyer & Neale, 2003).

In this paper, we articulate how technological capabilities affects the relationships between gender and the type of impression management strategies employed by individuals based on the Theory of Collaborative Technology Deployment (Carte & Chidambaram, 2004). As alluded to earlier, the Theory of Collaborative Technology Deployment purports that collaborative technologies have two sets of capabilities—reductive and additive (Carte & Chidambaram, 2004). While both sets of capabilities are expected to interact with gender, as described below, they are likely to have different impacts.

### 2.3.1 Reductive capabilities and gender (Hypothesis H1)

Reductive capabilities—which constrain traditional communication exchanges—include features such as visual anonymity, and equality of participation. According to Carte and Chidambaram (2004), these reductive capabilities, when employed early in the life of a diverse team, reduce the immediate salience of demographic characteristics such as gender and race and, hence, provide a task-focused environment in which members' contributions are judged based more on merit rather than on surface-level characteristics (Yoo & Alavi, 2004). Such a reorientation of team interactions enhances members' satisfaction and sense of belonging (Lind, 1999). Lind (1999) in her study of gender, found that females who collaborated in a virtual team context experienced higher levels of inclusiveness and satisfaction as compared to their male counterparts and to other females who collaborated in a face-to-face setting. Further, previous research has

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demonstrated that the use of electronic media enables leaders to better distinguish high quality contributions from low quality ones, as compared to face-to-face communication (Hedlund, IIgen, & Hollenbeck, 1998). By filtering out social contextual cues, the electronic medium diverts the attention of leaders to actual task-related messages (Hedlund et al., 1998).

In addition, CMC reduces the "normal turn taking" of a conversation carried in a face-to-face setting. In asynchronous CMC, any individual can post their messages on the bulletin board at anytime. Further, in synchronous CMC, each individual can send their message to others without interruptions. As such, the use of synchronous or asynchronous CMC reduces monopolization of conversations by dominant members and permits greater participation equality (Yoo & Alavi, 2004).

Further, as highlighted, the reductive capabilities of collaborative technologies indicate that there is a greater focus on task oriented activities. The task-focused nature of the setting suggests that there is limited time and space for involved members to engage in informal social elements (Elron & Vigoda-Gadot, 2006) and hence, less efforts to influence others via impression management strategies. The use of impression management strategies in a setting characterized by high degrees of reductive capabilities may, hence, take on a less significant role in the image building process.

We, thus, expect an interaction effect between media and gender on the amount of impression management tactics employed. The reductive capabilities, such as reduced social cues, will result in a greater emphasis on task focused exchanges as compared to demographic attributes such as gender. In a setting characterized by high degrees of virtualness, there is thus a lesser need for females and males to engage in impression

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management strategies that conform to gender societal expectations. Given the task-focused nature of the setting, even if females engage in self-promotion—a more aggressive strategy—they face a lower likelihood of experiencing social disapproval and be perceived negatively by their peers, a situation faced by females in a traditional environment. In other words, the reductive capabilities of highly virtual settings provide female team members the ability to break out of gender stereotypes, thus enabling females to engage in behaviors that are no different than their male counterparts. Conversely, due to the need to fulfill gender norms, it is reasonable to infer that, in a context characterized by low degrees of reductive capabilities, females will engage in more impression management strategies that are more inclined towards femininity (i.e. supplication) and less impression management strategies that are more associated with masculinity (i.e. self-promotion). Thus, we propose:

*H1a: In settings characterized by high degrees of reductive capabilities, females intending to emerge as leaders will engage in (a) more self-promotion strategies and (b) less supplication strategies as compared to their female counterparts in settings characterized by lower degrees of reductive capabilities.*

*H1b: In settings characterized by low degrees of reductive capabilities, males intending to emerge as leaders will engage in (a) more self-promotion strategies and (b) less supplication strategies as compared to their female counterparts in such settings.*

### 2.3.2 Additive capabilities and gender (Hypothesis H2)

As discussed earlier, the conflicting demands and incongruence between prescriptive gender behaviors and leader roles suggest that females are disadvantaged with respect to assuming leadership positions (Eagly & Karau, 2002). The broader implications of the above theories and findings are that females who would like to emerge as leaders are caught in a "Catch 22" situation—exhibiting masculinity behaviors

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risks social censure and disapproval while not being assertive enough risks perceptions of weakness, lower status and not having the ability to undertake leadership roles (Eagly & Karau, 2002).

In this section, we argue that the additive capabilities (in conjunction with the reductive capabilities discussed previously) reduce such a bias in a context of high virtualness. Additive capabilities—those that enhance traditional communication patterns—include features such as coordination support and electronic audit trails (Carte & Chidambaram, 2004). As the name of the contributor is typically tagged to the electronic trail or record (e.g., emails, threads of discussions in bulletin boards etc.), the extent of contributions made by each member is more apparent as compared to less virtual or face-to-face settings. Further, the archival capabilities permit members to review team outputs and interactions (Nemiro, 2002). As such, members are better able to monitor and evaluate members' deliverables in highly virtual settings compared to less virtual ones. Additive capabilities also allow members to schedule online meetings, assess project deadlines, examine member availability and track task progress. These augment a team's ability to execute the task on time and support members' ability to be productive and transcend geographic and temporal boundaries.

The additive capabilities further reinforce the notion that the importance of impression management strategies, while not irrelevant, is not the only path to being viewed as a leader. Contributing to the task in a visible way, through the additive capabilities of the technology, offers another path to being perceived as a leader. So, females can once again break free of the constraints of gender bias and freely contribute to the task at hand in very virtual environments and thereby emerge as leaders. A recent

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qualitative study indicated that global virtual teams employed "rational" strategies and behaviors that were more inclusive and consultation-oriented—strategies that were primarily aimed at *getting work done*—as compared to teams which meet face-to-face more often (Elron & Vigoda-Gadot, 2006). Such behaviors which additive capabilities support, coupled with the more task-focused and egalitarian settings offered by reductive capabilities, permits female members to aggressively participate in collaborative activities without fear of backlash and result in their being perceived as leaders—something that can be difficult to do in face-to-face settings. Thus, we propose:

*H2: In settings characterized by high degrees of technological capabilities (i.e. reductive and additive capabilities), females will be able to contribute to group work without social constraints thereby **emerging as leaders just as often as their** male counterparts.*

### 2.4 The impact of impression management strategies (Hypothesis H3)

The leadership literature has investigated the importance of impression management behaviors and the role of gender in leadership emergence. As leadership is a "dynamic and interactive process" (Gardner & Avolio, 1998), this suggests that, especially in mixed-gender groups, females may engage in certain impression management strategies in order to emerge as leaders. Unless females employ impression management behaviors that project themselves contrary to gender stereotypical image, the formation of initial impressions will be based on gender (Rudman, 1998). The broader implication is that females need to engage in atypical impression management behaviors, such as self-promotion, in order to overcome gender stereotypes (Rudman, 1998) and emerge as leaders. Further, by projecting an image of less power and qualification, females tend to be bypassed or overlooked for suitability of promotion and receive less visibility in organizations as a result (Guadagno & Cialdini, 2007). Through

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*self-promotion strategies* which emphasize one's achievements, abilities and performance (Turnley & Bolino, 2003), females could overcome the stereotypically feminine image and portray an image that is more consistent with the qualities of a leader, i.e. attributes that are more in line with masculinity, competency and proactive. The use of *supplication strategies*, on the other hand, could potentially reinforce the gender stereotypical image. Further, a recent study that was conducted in a CMC setting indicated that individuals who were perceived as being intelligent emerge as leaders (Wickham & Walther, 2007). In a related vein, self-promotion and supplication were found to be positively and negatively related to leadership emergence respectively (Chidambaram et al., 2008).

Viewed differently, despite the gender roles associated with different impression management strategies, research has consistently viewed leadership as being associated more with aggressive traits (such as power, influence and self promotion) and less with passive traits (such as humility, helpfulness and supplication). Thus, in line with theoretical arguments and empirical findings, we propose that members engaging in self-promotion (regardless of gender) are more likely to be viewed as leaders, while those who engage in supplication are less likely to be viewed as leaders. To sum up:

*H3a: Self-promotion strategies are positively related to leadership emergence.*
*H3b: Supplication strategies are negatively related to leadership emergence.*

### 2.5 The impact of time (Hypothesis H4)

While the examination of leadership emergence in CMC settings has gained increasing attention, the findings have been somewhat inconsistent and ambiguous. For instance, Wickham and Walther (2007) found that there is a relationship between the emerged leader and the perceived frequency of communication while Sarker and

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colleagues (Sarker, Grewal & Sarker, 2002) found that the perceived amount of communication *did not* affect the emergence of a leader in the initial stage. In another study, the researchers analyzed quantitative and qualitative data to determine behaviors that distinguish emergent leaders and non-leaders in a CMC context (Yoo & Alavi, 2004). Surprisingly, the ten-week study revealed that there were no differences between leaders and non-leaders in terms of expertise-related and relationship-oriented messages. However, it is important to note that the *actual* number of messages—expertise and relationship-related—rather than the perceived extent of contribution was examined. On the other hand, Misiolek and Heckman (2005) analyzed the pattern of messages and found that frequency of messages contributed to the identification of emergent leaders. Further, the findings revealed that task-oriented messages and social communication play important roles in determining who emerge as leaders. With regards to such ambiguous findings, we suggest that time plays a key role in how impression management strategies affect leadership emergence. Such impressions, as we discuss below, are particularly important in the initial period when perceptions of others have not yet been shaped. Beyond this period, as Attribution Theory (Maher, 1995; Cooper, 2005) suggests, such impressions are likely to have limited effect.

Time represents an important element that could possibly alter the effectiveness of impression management strategies (Tsai, Chen & Chiu 2005). As pointed out by Jones and Pittman (1982), in instances where one's claim about competency could be disputed, the effectiveness of impression management strategies is likely to be reduced. Indeed, prior studies that examined the use of impression management strategies tend to show a more consistent effect (e.g. Tsai et al., 2005). Tsai et al. (2005), for instance, found that

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when job interviews were of longer duration, the effects of applicants' self-promotion efforts became insignificant. They suggested that a reason for this result was that with longer interview times, interviewers obtained more "actual" (i.e., job-related) information about the applicant, and were not swayed by impression management behaviors. As such, the use of self-promotion was less successful. Higgins, Judge and Ferris (2003), in their meta-analysis, found that self-promotion tactics were less useful in the context of performance appraisals as compared to selection interviews. Indeed, Jones and Pittman (1982) suggested that when claims of competence are difficult to refute (e.g., in a brief interview), self-promotion was more likely to be useful. However, when claims of competency were easily verified, the use of self-promotion was less likely to be effective. Indeed, in an organizational environment where the supervisor has more opportunities and time to observe the subordinate, the efficacy of self-promotion and other influence tactics could be better discerned (Higgins et al., 2003; Tsai et al., 2005).

In contrast, in earlier phases of organizational relationships, members have not yet formed any impressions of one another (Cooper, 2005). The use of impression management strategies is, hence, more likely to be employed effectively (Cooper, 2005). It is thus not surprising that the use of self-promotion is likely to succeed in the short term, such as in interviews (Tsai et al., 2005). Further, the use of any favorable impression management strategies in initial interactions is especially useful in creating a favorable impression in the eyes of the target (Cooper, 2005). However, as the stage of relationship progresses and when the target determines the type of relationship formed (high-quality versus low quality), the use of impression management strategies to elicit positive assessments is not likely to be as useful. This line of reasoning is in line with the

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notion put forth by Attribution Theory, which posits that once certain impressions are formed, they are difficult to change (Cooper, 2005).

Moreover, the Hyperpersonal Model suggests that individuals in highly virtual environments form exaggerated, but lingering, impressions and attributions of one another *initially* based on the limited cues that are available (Walther, 1996). Previous findings examined in a CMC setting indicated that individuals who voice their opinions first or who were perceived to engage in more task contributions were more likely to emerge as leaders (Wickham & Walther, 2007). The establishment of initial impressions in promoting leadership emergence is, thus, vital in highly virtual teams.

In short, as the relationship develops and time passes, members have formed impressions of one another that tend to remain stable. According to Attribution Theory, once individuals form certain impressions of one another and categorize the other party, the status of the relationship is established (Cooper, 2005). The quality of these relationships is likely to be stable over time (Maher, 1995). It is, thus, expected that over time, the use of self-promotion and supplication strategies will have limited effects. Thus, we propose:

*H4: Over time, the (a) positive impact of self-promotion strategies and (b) the negative impact of supplication strategies, on leadership emergence becomes weaker.*

## 3. CONCLUSION

### 3.1 Summary

The above discussion presents a theoretical model that discusses how impression management strategies impact leadership emergence in teams and how this relationship is affected by time. The model also includes the antecedents of members' impression

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management behaviors by taking into account their gender and technological capabilities. It posits the two paths to affecting leadership emergence—an *indirect path* wherein women can exploit the reductive capabilities of the technology to engage in non-stereotypical impression management behavior (such as self-promotion) and thereby emerge as leaders; and, a *direct path* whereby the additive capabilities of the technology offer women the opportunity to aggressively contribute to the task and emerge as leaders.

Our theoretical model offers three interesting implications: *First,* successful impression management strategies (i.e., those that help establish leadership) in highly virtual settings are likely to differ from those in less virtual settings such that in settings characterized by high degrees of technological capabilities, the importance of impression management strategies in influencing leadership emergence will take a less vital role as compared to traditional settings. *Second,* initial impressions are presumed to matter. Once impressions are formed they are unlikely to change in the short term. They may change over the longer term, as groups build a history of interactions and performance, but those changes are likely to be slow. *Third,* greater "virtualness" offers minority members (women, typically) the freedom to break out of gender-stereotypical impression management strategies and establish themselves as leaders without facing potential backlashes (in contrast to settings that are less virtual).

## 3.2 Directions for future research

Although we have argued the positive effects of self-promotion, previous research has shown that the use of such strategies could result in negative effects, if not conveyed in a genuine manner (Turnley & Bolino, 1999). The ability to be perceived as genuine

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when using impression management strategies is moderated by personality attributes, such as self-monitoring. Thus, a limitation of our model is that it does not consider such contingency factors. These limitations, however, form potential future research avenues in this area.

Another potential area of research that could potentially emerge from our model is to describe the relationship between technological capabilities and extent of virtualness as well as how the extent of virtualness affects the relationship between leadership emergence and impression management strategies over time. Do leaders who emerge as leaders *initially* still remain leaders at the *end* of the project? In a similar vein, one could also examine the relative importance of first impressions versus final impressions in facilitating leadership emergence. While we have argued the significance of establishing first impressions based on Attribution Theory as well as the Hyperpersonal Model, research in HRM has highlighted the importance of recency effects in performance appraisals (Ambrose & Kulik, 2006).

A longitudinal study would enable researchers to capture the unfolding effects of impression management strategies over time. In fact, many researchers have called for the use of longitudinal studies in examining the effectiveness of impression management strategies in organizational contexts (e.g., Higgins et al., 2003). While instruments for measuring impression management strategies exist (e.g., Turnley & Bolino, 2001), the findings could be validated by examining the content of interactions among members of virtual teams. Thus, the use of a combination of surveys and content analysis would be ideal in gaining a more holistic picture of impression management strategies and leadership emergence.

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### 3.3 Implications

Since settings characterized by higher degrees of technological capabilities offer a more level-playing field for females thereby reducing the necessity to engage in gender-stereotypical behaviors, managers could consider using more electronic tools, especially rich in reductive capabilities, which for maximum impact would need to be deployed at the start of a project. Additive capabilities also offer an important avenue for members of minority groups to emerge as leaders by focusing on the task at hand without having to pay as much attention to impression management strategies (Elron & Vigoda-Gadot, 2006). Equally as important, this article highlights the temporal constraints of establishing impressions in the context of ongoing work. In other words, while virtual settings may offer greater freedom to break free of gender stereotypes and establish impressions, these impressions need to stand the test of time.

Viewed differently, actions speak louder than words. If people engage in self-promotion, they may emerge as leaders in the short term. Moreover, these impressions are likely to be stable in the short term and may linger during this early phase. However, as competing information and other influences, i.e., "actual information", begin to exert themselves—typically in the long run—they will play a more important role than the initially formed impressions. Thus, impression management will have a limited effect on leadership emergence over the long haul.

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