Social Influence Online:
A Tale of Gender Differences in the Effectiveness of Authority Cues

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ABSTRACT

This study examined the extent to which communicator salience manipulated by varying communication modes, authority-based social influence, and gender affect persuasion in online environments by utilizing a 2 by 2 between subjects design. Participants of the experiment were either presented with an authority-based influence attempt or no influence attempt. They then engaged in a persuasive interaction with a same-sex confederate via computer-mediated communication (CMC) or face-to-face. Results revealed that men in the Authority condition who interacted via CMC were more persuaded then men in the Peer condition who interacted via CMC. Additionally, men reported more confidence when interacting via CMC and reported that their decision was more influenced by the confederate online. Moreover, perceptions of the confederate varied by gender and communication mode. Analysis suggests that authority based influence tactics via CMC are more effective for men than for women.

Keywords: Authority, Communicator Salience, Gender Differences, Online, Persuasion, Relationships, Social Influence, Social Interaction

INTRODUCTION

The extent to which individuals interact and spend time online continues to grow. With the rise in time spent online, comes an increase in influence attempts occurring in online environments (Guadagno & Cialdini, 2005; Guadagno, Muscanell, Rice, & Roberts, 2013). Influence appeals have become normative in most online venues. For example, advertisements appear on web pages, social networking sites, in news feeds, and in email form. Past research provided information detailing the psychological processes and moderators for this influence when it occurs in a traditional face-to-face context (see Cialdini & Guadagno, 2005 for review). However, little is known about the process through which attitudes change when individuals are influenced while communicating online. With the advent of the Internet and the World

Wide Web, a new communication medium for interpersonal influence has emerged. Over the years, the literature on new media effects and social influence has grown. However, few researchers examined how attitude change occurring face-to-face (FtF) may differ from attitude change when the communicator of the influence is less salient. The present investigation focuses on the impact of communicator salience, authority, and gender on persuasion in online contexts.

Online Communication

Research has identified four features that differentiate computer-mediated communication (CMC) from face-to-face (FtF) communication (McKenna & Bargh, 2000; Bargh & McKenna, 2004): the time and pace of interaction, the ability to be relatively anonymous, the attenuation of physical distance, and the reduced emphasis on physical appearance (McKenna, Green, & Gleason, 2002). These features may account for differences between FtF and CMC (Sproull & Kiesler, 1985; Walther, Anderson, & Park, 1994) in such domains as groups (Spears, Postmes, Lea, & Wolbert, 2002), work settings (Cummings, Butler, & Kraut, 2002), and relationship formation (Guadagno, Okdie, & Kruse, 2012; McKenna et al., 2002). Although scholars have investigated these differences across multiple domains, little research has examined how these attributes might affect social influence processes in an online environment with decreased communicator cues (for reviews, see Guadagno & Cialdini, 2005; Guadagno, in press). The decrease in the salience of communicator cues (i.e., the decrease in the importance of physical appearance) may affect the degree to which influence attempts are efficacious across differing media.

Social Influence Principles

Cialdini (2009) has theorized that all influence tactics can be distilled down to six key principles of influence: authority, scarcity, social validation, commitment and consistency, and reciprocity. As implied by their names, each principle increases susceptibility to an influence appeal. Thus, people are more swayed by an authority figure, they find scarce items more desirable; if people see that others are acting in a certain manner or selecting a certain course of option; they are quick to jump on the bandwagon, people are consistent with their prior commitments; and people reciprocate to individuals who have given them items or done favors for them. These processes work best when people are heuristically processing information. Thus, if individuals are not motivated or unable to process the message in a thoughtful deliberate manner (i.e., centrally or systematically; Petty & Cacioppo, 1984; Chaiken & Eagly, 1976) they are more likely to use other cues to base their attitudes and decisions on (i.e., peripherally or heuristically).

When individuals are processing information heuristically, each of the six principles can serve as heuristic cues on which individuals can base decisions. For example, individuals may perceive the actions of many similar others as evidence that they should agree or comply with a persuasive communication or request. Each of the six principles has received extensive empirical support in FtF contexts (Cialdini & Goldstein, 2004). However, few of the principles have been applied to CMC (see Guadagno, in press, for an updated review). Given that substantial differences exist in social interaction in CMC versus FtF, there is evidence to argue that the six principles may operate differently online (Guadagno, in press; Guadagno & Cialdini, 2005; Guadagno, Muscanell, Rice, & Roberts, 2013). Of particular interest to the current paper is the principle of authority.

Authority

There is a dearth of research on examined differences in the social influence process across communication media leading some researchers to hypothesize that influence appeals may be differentially impactful because of the unique characteristics of the medium (Guadagno & Cialdini, 2005; Guadagno, in press). The principle of authority posits that information origi-

nating from a source perceived as an authority figure will be more persuasive than the same information presented by someone not perceived as an authority (Hofling, Brotzman, Dalrymple, Graves, & Pierce, 1966; Milgram, 1963). In most cases, authority figures are influential because they are perceived as possessing expertise or knowledge that the influence target does not posses (Blass, 1999). Even when individuals possess no actual authority in situations, but self-present as if they do have authority, their recommendations can be influential (Sagarin, Cialdini, Rice, & Serna, 2002). In either case, individuals can convey their authority to others by engaging in behaviors or presenting cues of their authority (e.g., doctors' white coats symbolize their expertise in the medical profession) and these cues are more likely to be salient when individuals interact FtF compared to CMC. Thus, the principle of authority may be attenuated in persuasive attempts that occur online because it is difficult to convey authority cues online. Furthermore, the limited research that examines authority online reported mixed results (Guadagno & Cialdini, 2005; Guadagno, in press). However, the study most pertinent to the present research (Gueguen & Jacob, 2002) revealed that that authority cues such as email signatures can convey status in email interactions, the effectiveness of which is enhanced when the request from an authority is targeted at in-group members. In this case, authority was found to be influential in obtaining compliance with a request. Unfortunately, the authors did not investigate gender differences nor did they vary the gender of the authority figure.

Social Influence and Gender Differences Online

Most studies that examine the effect of reduced communicator salience on persuasion manipulate communicator salience by varying the communication mode of the persuasive communication. The initial studies compared written versus FtF interactions (Chaiken & Ea-

gly, 1976; 1983) and have transitioned to more contemporary communication modes, such as CMC (Guadagno, in press). For example, Guadagno and Cialdini (2002) presented participants to a persuasive communication emitted by a same-sex confederate via CMC (e.g., email) or FtF. In a series of two studies, the researchers reported that men and women differed in the extent to which participants were swayed as a function of communication mode. Women were influenced more in FtF than CMC due to reduced communicator cues. Men, on the other hand, did not vary by communication mode in the extent to which they were influenced. Furthermore, the researchers found that liking for the confederate drove persuasion for women but not for men. Thus, when communicator cues are present, women are likely to use these cues in the formation and change of attitudes. This finding was replicated and expanded upon in three additional studies demonstrating that the composition of the dyad (same vs. mixed sex), the nature of the prior relationship, and the similarity with the confederate all affected the extent to which participants were influenced online (Guadagno & Cialdini, 2002, 2005, 2007; Muscanell & Guadagno, 2013, in review). Generally, men were more likely to respond negatively to a communicator with which they had an adversarial relationship when the influence attempt took place in person.

Research examining the impact of the decreased salience of an interaction partner in CMC indicates that the outcomes of such an exchange often vary from what occurs in a more traditional FtF communication. Additionally, as the above research by Guadagno and Cialdini (2002) illustrates, this outcome may or may not be advantageous for the individuals interacting. This analysis is supported by other work examining online interactions. For instance, Morton et al. (2003) reported that African Americans and Hispanics pay more for the same automobile than Caucasians when the purchase takes place FtF though this difference is nonexistent when

the purchase is made online. Another study on negotiation finds that higher levels of rapport in FtF negotiations compared to telephone negotiations leads to better negotiation outcomes (Drolet & Morris, 2000). Moreover, negotiations conducted over email are more likely to fail than those that take place FtF.

The cause of breakdown in email negotiations tends to be exchanges in which offense is taken at blunt and, sometimes misconstrued, messages (Morris, Nadler, Kurtzberg, & Thompson, 2002). Further support for this hypothesis can be seen in other research indicating individuals form more positive impressions of others and are better able to perceive one another (i.e., self-other agreement) when they communicate FtF compared to CMC (Okdie, Guadagno, Bernieri, Geers, & McLarney-Vesotski, 2011). Other research confirms that initiating a CMC negotiation using humor (i.e., sending a cartoon) or a prior phone call generates higher levels of trust between the parties leading to a more positive negotiation outcome, particularly when the negotiation interactants are women (Kurtzberg, Naquin, & Belkin, 2009; Morris, et al., 2002). Thus, research shows a reduction in social cues can impact the persuasion process across several studies an in several contexts. However, a reduction in social cues can be attenuated by a number of factors.

Taken together results of these studies show that women may have difficulty persuading other women via CMC unless they are able to discover some sort of similarity or commonality. Whereas, for men, the mode of communication is less important except in the case of a competitor or out-group member. In this case, men are likely to reject even the sound arguments of such a person in a FtF communication. The decreased salience of the interaction partner's social cues online appears to alleviate the competitive aspects of the interaction. Thus, it is likely that the online persuasion process operates differently for men and women given the reduction in communicator salience (Guadagno & Cialdini, 2002; 2005; 2007).

Study Purpose and Research Question

The literature reviewed above suggests that men interacting via text-based CMC may be more persuadable online relative to women. Furthermore, men are more attentive to communicator cues that convey competition or out-group membership. Thus, this difference is likely to be exacerbated when the interaction partner is another man and also an authority. However, since no previous analysis has evaluated the impact of authority cues in a synchronous same-sex online interaction, we focused on the aspect identified by prior research: Men are more affected by communicator cues that create an adversarial role between themselves in the influence agent (Guadagno & Cialdini, 2002, 2005, 2007). The current study sought to examine the extent to which communicator salience, social influence, and gender affect online persuasion by manipulating communicator salience and exposing participants to an influence attempt from an authority.

Given the paucity of research on the process of persuasion in CMC environments, we hypothesized that the analysis could result in one of three patterns. One pattern could be that the women would ignore the authority cue as they had ignored the competitive cue (see e.g., Guadagno & Cialdini, 2005) and demonstrate no difference by condition, while the men would attend to the authority cue and be influenced by the authority figure relative to the no authority cue control. The second pattern could be that both men and women would ignore the communicator cues in CMC due to reduced communicator salience and would therefore be more influence in the FtF conditions, as reported in prior research on social influence in small groups (Dubrovsky, Kiesler, & Sethna, 1991). The third pattern could be that men would display no difference by communication mode, as in a study by Guadagno and Cialdini (2002). Since this is the first study to examine the influence of authority and gender in dyadic online interactions, the likely pattern of results remains an open research question.

METHOD

Design

The study employed a 2 x 2 between subjects design, with communication mode (FtF vs. CMC) as the first factor and type of social influence (Authority vs. Peer) as the second factor. We manipulated communication mode by having same-sex confederates attempt to influence the participant in a FtF or CMC (i.e., emailed) conversation. Authority was manipulated similarly to Dubrovsky et al. (1991): the authority was a graduate student; the non-authority was a member of introductory psychology participant pool.

Participants

The study used a convenience sample of 78 undergraduate students (21 men and 57 women) who participated in the experiment in exchange for partial course credit. Participants mean age was 18.96 (*SD* = .97). The majority of participants identified themselves as Caucasian (91%).

Procedures

Participants in all conditions were informed that they would take part in a decision-making task with another participant. During this task, they would have to talk with another "student" (in reality - the confederate) to decide between two charities. They were told that the psychology department would donate money to whichever charity they selected. Prior to engaging in the discussion with the confederate, participants were introduced to the confederate via CMC (e.g., email) or FtF, depending on condition. The confederate always introduced him or herself first and was always the same sex as the participant as recommended by prior research (Guadagno & Cialdini, 2002, 2007; Guadagno, Blascovich, Bailenson, & McCall, 2007; Muscanell & Guadagno, 2013, in review). As part of the introduction, confederates stated their name and age, mentioned that they were from a nearby large city, and revealed whether they were graduate students (Authority) or participant pool students (Peer). Confederates occupied all role assignments required by the experimental condition. That is, a single confederate may have acted as a graduate student in a single session and a graduate student in the next. Unless the confederate had the same name as the participant—which would add similarity as a confounding variable—actual names were provided. As noted above, during the introduction participants in the authority condition were told that the confederate was a graduate student filling in for a participant who had not shown up for the experiment.

After the introductions were complete, participants and confederates engaged in a discussion with the goal of deciding where to donate the money: to a domestic violence charity or a charity providing aid to intellectually disabled individuals. Both charities were actual local charity organizations; they were pretested and were found to be not significantly different in the subject population. Additionally, the pre-test indicated that men and women did not significantly differ in their evaluations of each charity. During the discussion on how to allocate the funds, the confederate always expressed an opinion first and presented three author-generated reasons why the domestic violence charity should receive the funds: 1) "It provides a place for rape victims to be able to discuss what happened openly with others who have had the same experience"; 2) "They provide counseling services so the victims will be able to be rehabilitated from the abuse"; 3) "Domestic violence and sexual assault happens fairly often, especially around campus, so this is a good organization to be in the city."

Once the confederate finished stating their opinion, the participant had an opportunity to respond. Participants in the FtF condition were then taken to a separate room to fill out the dependent measures. Participants in the CMC condition ended the email interaction and filled out the dependent measures on the same computer. Following the completion of the dependent measures, participants were debriefed and dismissed.

Dependent Measures

Allocation of Money to Charity

After discussion with their partner, participants explained which charity (i.e., advocated or alternate) they thought the psychology department should allocate the money to. The dichotomous item read, "Please indicate which of the two charities the psychology department should allocate the money."

Attitudes Toward Advocated Charity

To assess participant attitudes toward the charities, participants answered 6 questions relating to the charities. The questionnaire asked participants to report their opinions on the charity in general and in the following domains: importance, trustworthiness, effectiveness, importance of providing help, and interest in volunteering. All questions were answered on a 9-point Likert scale. To increase reliability in the assessment of persuasion, the attitude items were combined to form an overall attitude index towards the charities. Higher numbers correspond to more positive attitudes toward the charity. The attitude index produced reliability coefficient (Cronbach's α) of .79.

Decision Confidence

Additionally, to assess participants' confidence in their decision they were asked a single item that read, "How confident do you feel in your decision about the allocation of the money?" The item was asked on a 7-point scale from 1 ("Not confident") to 7 ("Extremely confident"). Higher scores demonstrated greater confidence in a decision.

Perception of Confederate

To assess participants' perceptions of their interaction partners, they completed several questions about their partner. Among these were questions about their partners' status, the impact they felt their partner had on their decision, and other general characteristics (e.g.,

trustworthiness). All answers were measured on a 9-point Likert scale with higher numbers indicating more positive perceptions of their interaction partners.

RESULTS

Manipulation Check

To ensure that the authority manipulation had the desired effect on participants an independent samples t-test was conducted on participant's perception of their partner's status using influence condition as a grouping variable. As predicted, those in the Authority condition ($M = 6.29$, $SD = 1.43$) were significantly more likely to perceive the confederate as high in status compared to those in the Peer condition ($M = 5.54$, $SD = .98$), $t(71.22) = -2.71$, $p = .008$. There were no other significant effects on the manipulation check.

Social Influence Measures

Allocation of Money to Charity

Participants designated which of the two charities they would like the Psychology Department to allocate the money. The results were in the predicted direction but demonstrated a ceiling effect. Specifically, 100% of those in the authority condition chose to donate the money to the advocated charity. Additionally, 89% of participants in all conditions chose to give the money to the advocated charity (see Table 1 for percent allocation by condition). Thus, the percentage of participants giving to each charity did not significantly differ by condition, X^2 (1, $N = 78$) = .43, $p = .68$.

Attitudes Towards Advocated Charity

To examine the effect of the influence technique and communication mode on participants' attitudes toward the charity, a 2 (Influence) by 2 (Communication) by 2 (Gender) factorial ANOVA was run on the composite measure of attitudes toward the advocated charity. Results

Table 1. Percentage of participants who chose to give the money to the advocated charity by condition

Condition		
FtF	Authority	100%
	Peer	85%
CMC	Authority	100%
	Peer	76.5%

indicated a significant gender main effect such that women ($M = 7.50$, $SD = .85$) rated the advocated charity significantly more positively than did men ($M = 7.01$, $SD = 1.18$), $F(1,70) = 3.83$, $p = .05$, $\eta_p^2 = .05$. The main effect of gender was qualified by a significant Influence condition by Communication mode two-way interaction $F(1,70) = 4.36$, $p = .04$, $\eta_p^2 = .05$. Simple effects showed that when in the authority condition, the confederate was significantly more persuasive than when she or he was in the Peer condition. However, this difference was only significant when the communication mode was CMC (vs. FtF). This was qualified by a significant three way Influence condition by Communication mode condition by Gender interaction, $F(1,70) = 4.29$, $p = .04$, $\eta_p^2 = .05$. Simple effects revealed that the above three-way interaction was driven by the men in this study. Specifically, men who interacted via CMC and were in the authority condition ($M = 7.40$, $SD = 1.14$) reported significantly more positive

attitudes towards the advocated charity than men who interacted via CMC and were in the Peer condition ($M = 5.83$, $SD = 1.45$), $p < .05$. No other significant differences were found, p's $> .05$ (see Table 2 for all means by condition).

Decision Confidence

To examine the extent to which participants felt confident in their decision to allocate money to the charities, a 2 (Influence) by 2 (Communication mode) by 2 (Gender) factorial ANOVA was run on the on participants reported confidence with their decision. The ANOVA yielded a significant Influence by Communication mode two-way interaction $F(1,70) = 6.87$, $p = .01$, $\eta_p^2 = .08$ and a significant two-way Influence by Gender interaction, $F(1,70) = 8.14$, $p = .006$, $\eta_p^2 = .10$. These two-way interactions were qualified by a significant 3-way Influence by Communication mode by Gender interaction, $F(1,70) = 4.71$, $p = .03$, $\eta_p^2 = .06$. Simple effects

Table 2. Means by condition on attitude composite towards advocated charity

Condition		Gender	M	SD
Peer	FtF	Women	7.39	0.81
		Men	7.66	0.50
	CMC	Women	7.47	0.83
		Men	5.83[a]	1.45
Authority	FtF	Women	7.52	0.95
		Men	7.16	0.93
	CMC	Women	7.62	0.89
		Men	7.40[a]	1.14

Note: Means with the same superscript are significantly different from one another.

indicated that men who interacted via FtF and were in the Peer condition ($M = 7.00$, $SD = 0.00^1$) were significantly more likely to report being confident in their decision to allocate the funds to a charity than were men who interacted via FtF and were in the authority condition ($M = 4.42$, $SD = 1.18$), $p < .05$.

Perceived Impact of Confederate

To examine whether participants thought that the confederate affected their decision, a 2 (Influence) by 2 (Communication mode) by 2 (Gender) factorial ANOVA was conducted on participants' reported perception that the confederate influenced their decision. The ANOVA produced a significant main effect of gender such that men ($M = 4.12$, $SD = 1.86$) were significantly more likely to report that the confederate affected their decision regarding which charity to allocate the money to compared to women ($M = 2.93$, $SD = 1.87$), $F(1,70) = 5.67$, $p = .02$, $\eta_p^2 = .07$.

Perception of Confederate

To examine the extent to which participants thought that the confederate was biased in their thoughts on where to allocate the money, a 2 (Influence) by 2 (Communication mode) by 2 (Gender) factorial ANOVA was conducted on the amount of bias participants perceived in the confederate. The analysis revealed a significant Communication mode by Gender interaction, $F(1,70) = 5.55$, $p = .02$, $\eta_p^2 = .07$. Specifically, mirroring the attitude data, men ($M = 2.87$, $SD = 1.77$) who interacted via CMC were significantly more likely to report that the confederate was biased in their decision to allocate the money compared to men who interacted FtF ($M = 1.45$, $SD = 70$), $p < .05$. Additionally, participants who interacted via FtF ($M = 7.89$, $SD = .97$) were significantly more likely to view the confederate as friendly compared to those who interacted via CMC ($M = 6.79$, $SD = 1.72$), $F(1,70) = 8.45$, $p = .005$, $\eta_p^2 = .10$. Likewise, participants in the Authority condition ($M = 6.88$, $SD = 1.39$) perceived the confederate to be significantly more trustworthy

than participants in the Peer condition ($M = 6.05$, $SD = 1.11$), $F(1,70) = 5.77$, $p = .01$, $\eta_p^2 = .07$. Participants in the Authority condition ($M = 6.74$, $SD = 1.57$) perceived the confederate to be significantly more modest than those in the Peer condition ($M = 5.89$, $SD = 1.54$), $F(1,70) = 4.00$, $p = .04$, $\eta_p^2 = .05$. Moreover, once again mirroring the attitude results, a significant Influence by Gender interaction showed that men in the Authority condition ($M = 8.21$, $SD = .57$) thought that the confederate was more approachable than men in the Peer condition ($M = 6.54$, $SD = 1.81$), $F(1,70) = 4.76$, $p = .03$, $\eta_p^2 = .06$.

CONCLUSION

As the use of new technologies increases and morphs, understanding how social influence occurs in new communication channels becomes increasingly vital. The current study examined how communicator salience (manipulated by varying communication modes), social influence, and gender affect persuasion in online contexts. Analysis supported the third contention proposition that men would be more susceptible to influence appeals when they occurred in an online environment and the social influence appeals came from an authority figure. Results confirmed this proposition, as the influence of an authority figure was found more impactful for men who interacted via CMC. In addition, men also perceived their interaction partners to be more biased in their attitudes towards the charities. Moreover, men were more likely than women to affirm that their interaction partners had impacted their decision. Finally, men who communicated online reported less confidence in their decision to allocate the funds to their chosen charity. However, the results of the current experiment should be interpreted with caution since 85% of the individuals in the Peer condition chose to allocate their funds to the advocated charity despite reporting equivalency at pretest. Taken together, the results of the current study suggest that persuasion in online contexts may differ from persuasion that occurs

in face-to-face communication. Specifically, the reduced salience of the communicator when interacting online may lead to increased persuasion for men when they are interacting with same-sex individuals.

Future research should examine how the persuasion process may vary when individuals interact in mixed-sex dyads, as research makes evident that men and women differ in their behavior when they are interacting with members of the opposite sex (Carli, 1989; Guadagno et al., 2007; Muscanell & Guadagno, 2013, in review). As the current literature indicates a dearth of research on social influence online, future studies should analyze the influence techniques and technologies in which this social influence may occur (Guadagno, in press).

While the current study focused on social influence via CMC in a text-based form, the opportunities for online interaction are growing. The ability to communicate online is changing as a result of newer technologies. For instance, the communicator is likely to be more salient as the form of media used to communicate becomes more similar to FtF communication, thereby reducing any communication mode effect (Okdie, Guadagno, & Petrova, 2008). Although the results of this study suggest that men are more persuaded in text-based online environments, this effect may be less likely in other online contexts in which the communicator is more salient. Moreover, future research should investigate the extent to which individual differences moderate this effect. Past research reports that individual differences such as a belief in a just world (Edlund, Sagarin, & Johnson, 2007), need for cognition, and self-monitoring (Key, Edlund, Sagarin, & Bizer, 2009) can impact reciprocity and other forms of persuasion.

Finally, most of the literature that identifies gender differences in online influence reports that women are most likely to be the source of the gender difference (see Guadagno & Cialdini, 2005; Guadagno, in press). Men typically show no difference online as they focus more on the content of the persuasive argument rather than the cues of the communicator. Previous research has shown this effect attenuated when

the source of persuasion is a woman (Muscanell & Guadagno, 2013, in review). The present investigation is the first to demonstrate that authority cues are effective for influencing men but not women. The study opens a multitude of additional research questions for future investigation. Authority is a cue that is more prescriptive for men than for women (Eagly, 1987). Prior literature on gender differences showed that women were not influenced online unless cues such as liking – a feminine prescriptive cue – were present. Therefore, future research should examine whether men exhibit a general pattern of influenceability online when the communicator cues are traditionally masculine in origin.

REFERENCES

Bargh, J. A., & McKenna, K. Y. A. (2004). The internet and social life. *Annual Review of Psychology*, *55*, 573–590. doi:10.1146/annurev.psych.55.090902.141922 PMID:14744227.

Blass, T. (1999). The Milgram paradigm after 35 years: Some things we now know about obedience to authority. *Journal of Applied Social Psychology*, *29*(5), 955–978. doi:10.1111/j.1559-1816.1999.tb00134.x.

Carli, L. L. (1989). Gender differences in interaction style and influence. *Journal of Personality and Social Psychology*, *56*(4), 565–576. doi:10.1037/0022-3514.56.4.565.

Chaiken, S., & Eagly, A. H. (1976). Communication modality as a determinant of message persuasiveness and message comprehensibility. *Journal of Personality and Social Psychology*, *34*(4), 605–614. doi:10.1037/0022-3514.34.4.605.

Chaiken, S., & Eagly, A. H. (1983). Communication modality as a determinant of persuasion: The role of communicator salience. *Journal of Personality and Social Psychology*, *45*(2), 241–265. doi:10.1037/0022-3514.45.2.241.

Cialdini, R. B. (2009). *Influence: Science and practice* (5th ed.). New York: HarperCollins.

Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology*, *55*, 591–622. doi:10.1146/annurev.psych.55.090902.142015 PMID:14744228.

Cummings, J., Butler, B., & Kraut, R. (2002). The quality of online social relationships. *Communications of the ACM*, *45*(7), 103–108. doi:10.1145/514236.514242.

Drolet, A. L., & Morris, M. W. (2000). Rapport in conflict resolution: Accounting for how face-to-face contact fosters mutual cooperation in mixed-motive conflicts. *Journal of Experimental Social Psychology*, *36*(1), 26–50. doi:10.1006/jesp.1999.1395.

Dubrovsky, V. J., Kiesler, S., & Sethna, B. N. (1991). The equalization phenomenon: Status effects in computer-mediated and face-to-face decision-making groups. *Human-Computer Interaction*, *6*(2), 119–146. doi:10.1207/s15327051hci0602_2.

Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.

Edlund, J. E., Sagarin, B. J., & Johnson, B. S. (2007). Reciprocity and the belief in a just world. *Personality and Individual Differences*, *43*(3), 589–596. doi:10.1016/j.paid.2007.01.007.

Guadagno, R. E. (in press). Social influence online: The six principles in action. In C. Liberman (Ed.), *Casing persuasive communication*. Dubuque, IA: Kendall Hunt.

Guadagno, R. E., Blascovich, J., Bailenson, J. N., & McCall, C. (2007). Virtual humans and persuasion: The effects of agency and behavioral realism. *Media Psychology*, *10*(1), 1–22.

Guadagno, R. E., & Cialdini, R. B. (2002). Online persuasion: An examination of gender differences in computer-mediated interpersonal influence. *Group Dynamics*, *6*(1), 38–51. doi:10.1037/1089-2699.6.1.38.

Guadagno, R. E., & Cialdini, R. B. (2005). Online persuasion and compliance: Social influence on the Internet and beyond. In Y. Amichai-Hamburger (Ed.), *The social net: The social psychology of the Internet* (pp. 91–113). New York: Oxford University Press.

Guadagno, R. E., & Cialdini, R. B. (2007). Persuade him by email, but see her in person: Online persuasion revisited. *Computers in Human Behavior*, *23*(2), 999–1015. doi:10.1016/j.chb.2005.08.006.

Guadagno, R. E., Muscanell, N. L., Rice, L. M., & Roberts, N. (2013). Social influence online: The influence of social validation and likability on compliance. *Psychology of Popular Media Culture*, *2*(1), 51–60. doi:10.1037/a0030592.

Guadagno, R. E., Okdie, B. M., & Kruse, S. (2012). Dating deception: Gender, online dating, and exaggerated self-presentation. *Computers in Human Behavior*, *28*(2), 642–647. doi:10.1016/j.chb.2011.11.010.

Gueguen, N., & Jacob, C. (2002). Solicitation by e-mail and solicitor's status: A field study of social influence on the web. *Cyberpsychology & Behavior*, *5*(4), 373–383. doi:10.1089/109493102760275626 PMID:12216702.

Hofling, C. K., Brotzman, E., Dalrymple, S., Graves, N., & Pierce, C. M. (1966). An experimental study in nurse-physician relationships. *The Journal of Nervous and Mental Disease*, *143*(2), 171–180. doi:10.1097/00005053-196608000-00008 PMID:5957275.

Key, M. S., Edlund, J. E., Sagarin, B. J., & Bizer, G. Y. (2009). Individual differences in susceptibility to mindlessness. *Personality and Individual Differences*, *46*(3), 261–264. doi:10.1016/j.paid.2008.10.001.

Kurtzberg, T. R., Naquin, C. E., & Belkin, L. Y. (2009). Humor as a relationship-building tool in online negotiations. *The International Journal of Conflict Management*, *20*(4), 377–397. doi:10.1108/10444060910991075.

McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, *4*(1), 57–75. doi:10.1207/S15327957PSPR0401_6.

McKenna, K. Y. A., Green, A. S., & Gleason, M. E. J. (2002). Relationship formation on the Internet: What's the big attraction. *The Journal of Social Issues*, *58*(1), 9–31. doi:10.1111/1540-4560.00246.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology*, *67*, 371–378. doi:10.1037/h0040525 PMID:14049516.

Morris, M., Nadler, J., Kurtzberg, T., & Thompson, L. (2002). Schmooze or loose: Social friction and lubrication in e-mail negotiations. *Group Dynamics*, *6*, 89–100. doi:10.1037/1089-2699.6.1.89.

Morton, F. S., Zettelmeyer, F., & Silvia-Risso, J. (2003). Consumer information and discrimination: Does the internet affect the pricing of new cars to women and minorities? *Quantitative Marketing and Economics*, *1*(1), 65–92. doi:10.1023/A:1023529910567.

Muscanell, N. L., & Guadagno, R. E. (2013, in review). On the Internet, she's more credible to him, but less likable to her: Gender differences in online persuasion.

Okdie, B. M., Guadagno, R. E., Bernieri, F. J., Geers, A. J., & Mclarney-Vesotski, A. R. (2011). Getting to know you: Face-to-face vs. online interactions. *Computers in Human Behavior*, *27*(1), 153–159. doi:10.1016/j.chb.2010.07.017.

Okdie, B. M., Guadagno, R. E., & Petrova, P. K. (2008, February). *Gender differences in self-focus in computer-mediated persuasion.* Paper presented at the Annual Meeting for the Society for Personality and Social Psychology, Albuquerque, NM.

Petty, R. E., & Cacioppo, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion. *Journal of Personality and Social Psychology*, *46*(1), 69–81. doi:10.1037/0022-3514.46.1.69.

Sagarin, B. J., Cialdini, R. B., Rice, W. E., & Serna, S. B. (2002). Dispelling the illusion of invulnerability: The motivation and mechanisms to resistance to persuasion. *Journal of Personality and Social Psychology*, *83*(3), 526–541. doi:10.1037/0022-3514.83.3.526 PMID:12219852.

Spears, R., Postmes, T., Lea, M., & Wolbert, A. (2002). The power of influence and the influence of power in virtual groups: A SIDE look at CMC and the Internet. *The Journal of Social Issues*, *58*, 91–108. doi:10.1111/1540-4560.00250.

Sproull, L., & Kiesler, S. (1985). Reducing social context cues: Electronic mail in organizational communication. *Management Science*, *32*(11), 1492–1512. doi:10.1287/mnsc.32.11.1492.

Walther, J. B., Anderson, J. F., & Park, D. (1994). Interpersonal effects in computer-mediated interaction: A meta-analysis of social and anti-social communication. *Communication Research*, *21*(4), 460–487. doi:10.1177/009365094021004002.

ENDNOTES

[1]   The standard deviation was 0. All participants in that condition selected the same response.

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