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Who Takes the Floor and Why: Gender, Power, and Volubility in Organizations

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Abstract

Although past research has noted the importance of both power and gender for understanding volubility—the total amount of time spent talking—in organizations, to date, identifying the unique contributions of power and gender to volubility has been somewhat elusive. Using both naturalistic data sets and experiments, the present studies indicate that while power has a strong, positive effect on volubility for men, no such effect exists for women. Study 1 uses archival data to examine the relationship between the relative power of United States senators and their talking behavior on the Senate floor. Results indicate a strong positive relationship between power and volubility for male senators, but a non-significant relationship for female senators. Study 2 replicates this effect in an experimental setting by priming the concept of power and shows that though men primed with power talk more, women show no effect of power on volubility. Mediation analyses indicate that this difference is explained by women's concern that being highly voluble will result in negative consequences (i.e., backlash). Study 3 shows that powerful women are in fact correct in assuming that they will incur backlash as a result of talking more than others—an effect that is observed among both male and female perceivers. Implications for the literatures on volubility, power, and previous studies of backlash are discussed.

Keywords: volubility, power, gender, organizations, stereotyping

Given its centrality to psychology, impression formation, and interpersonal interactions, the study of volubility—the total amount of time spent talking in group contexts—has generated a considerable amount of research over the last fifty years. Individuals mostly base their judgments of others' traits (e.g., how dominant they are) or states (e.g., whether they are a manager or a subordinate) on others' verbal and nonverbal behaviors. Thus how much an individual talks in interpersonal interactions is a key way in which we not only draw inferences about that person but also in how we interact with him or her.

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Moreover, interpersonal communication—whether verbal or nonverbal—has a direct impact on the way that status and power hierarchies are built, maintained, and changed. For example, research by Bales and his colleagues showed that power hierarchies are formed largely based on how much members participate in the group (Bales, 1950; Bales et al., 1951); the more an individual verbally participates, the more likely that individual will be seen as having power. Therefore, volubility not only plays an important role in establishing power hierarchies but also in communicating one's power to others (Mast, 2002).

Overall, two main factors have emerged as central to understanding volubility in organizations: power and gender (Coates, 1986; James and Drakich, 1993; Tannen, 1993; Locke and Hauser, 1999). Identifying the unique contributions of each of these factors, however, has been somewhat elusive. Past research has typically examined the emergent relationships between power and volubility (e.g., the correlation between talking time and reported measures of dominance) but has not manipulated power independent of gender (see James and Drakich, 1993, for a review). In most social contexts, women have less power than men, and as a result, power and gender are naturally confounded (Dovidio et al., 1988; Sidanius and Pratto, 1999). Therefore, on the basis of previous research it is difficult to identify the unique effects of power on volubility independent of preexisting trait variables, such as gender, and the extent to which power has equivalent effects on men and women's volubility in organizations.

The present studies attempt to address these issues by examining the independent effects of power and gender on volubility, as well the potential interaction. Study 1 examined the relationship between volubility, power, and gender using archival data from the U.S. Senate, a real-world organization in which power varied independently of gender. Study 2 was a laboratory experiment that independently manipulated power for both men and women and examined the resulting effects on volubility. Study 3 then examined whether powerful women are correct in assuming that they will incur backlash as a result of talking more than others.

THE EFFECTS OF POWER AND GENDER ON VOLUBILITY

The Effects of Power on Volubility

Here, power is defined in terms of control over resources (e.g., Keltner, Gruenfeld, and Anderson, 2003; Thibaut and Kelley, 1959) and what is frequently referred to as "social power," which highlights an individual's capacity to influence and control the behavior of others (e.g., Overbeck and Park, 2001; Galinsky, Gruenfeld, and Magee, 2003). A large literature has established that experimental manipulations of power have a number of important psychological consequences. For example, power increases a person's likelihood of engaging in approach-type behaviors (Keltner, Gruenfeld, and Anderson, 2003), such as expressing more confidence in their own ideas (Galinsky et al., 2008), taking risks (Anderson and Galinsky, 2006), and taking action to accomplish their goals (Galinsky, Gruenfeld, and Magee, 2003). Such increases in agency have been linked to more general increases in perceptions of control (Fast et al., 2009). Past research has found that experimental manipulations of power have a

similar effect on both men and women. Furthermore, previous research on volubility has generally assumed that power should increase volubility, regardless of gender (see Mast, 2002, for a review). This relationship between volubility and power may exist because the amount of attention that is paid to an individual in social groups is directly related to that individual's ability to control the behavior or opinions of others (Fiske, 2010). When an individual is higher in power than the other members of the group, he or she may feel licensed to demand the attention of others (Locke, 1998; Mast, 2002). In turn, others may allow that individual to talk for a disproportionately longer amount of time, perhaps to signal deference or to avoid negative consequences that may result from failing to do so (Fiske, 2010).

Several studies in the communications literature have found that volubility is positively related to leadership and dominance in new groups (for meta-analyses, see Stein and Heller, 1979; Mullen, Salas, and Driskell, 1989; Mast, 2002). For example, Schmid Mast (2001) examined all-male and all-female small-group discussions and found a relationship between talking time and ratings of dominance reported by other group members. As discussed above, however, a limitation of past research in this area is that these studies have not independently manipulated power, instead observing the emergent relationships between power and volubility in a group context (e.g., Kimble and Musgrove, 1988; Palmer, 1989; Linkey and Firestone, 1990; Ng, Brooke, and Dunne, 1995). This point is critical because, as noted by several researchers, men disproportionately occupy positions of social, political, and economic power relative to women (e.g., Basow, 1986). Moreover, these power differences may often be reflected in patterns of communication, as strong parallels have been observed between interactions among individuals with high and low power and interactions among men and women (Henley, 1977). Therefore, to assess the extent to which power and gender may independently contribute to volubility (or potentially interact), it is necessary to manipulate power for both men and women directly or examine contexts in which power varies independently of gender.

Nevertheless, one relatively straightforward prediction from these literatures is that power should have a main effect on both men and women's talking time in organizations: in general, high-power individuals should talk more than low-power individuals, regardless of gender, because power licenses those individuals to talk for a greater amount of time relative to other individuals in the group:

> **Hypothesis 1:** There will be a main effect of power on volubility such that individuals who are higher on objective measures of power will speak for a longer time than individuals who are lower on objective measures of power.

The Effects of Gender on Volubility

At the same time, a great deal of research has established that women are less likely than men to engage in aggressive or dominant behaviors (Eagly and Steffen, 1986; Archer, 2009). For example, in small group contexts, women are less likely to engage in nonverbal displays such as chin thrusts as well as verbal displays, such as initiating speech (Dovidio et al., 1988). Similarly, women are less likely than men to emerge as a leader (Eagly and Karau, 1991), initiate

negotiations (Bowles, Babcock, and Lai, 2007), and behave aggressively (Eagly and Steffen, 1986; Archer, 2009). Conversely, women are more likely than men to engage in low-power displays, such as smiling (LaFrance, Hecht, and Paluck, 2003) and maintaining eye contact when an interaction partner is speaking (Swim, 1994).

These basic gender differences, many of which have been confirmed via meta-analyses, can be explained in terms of social role theory (Eagly and Steffen, 1984, 2000). Social role theory states that because men and women occupy different social roles, they behave in predictably different ways in line with these roles. Specifically, because women are more likely than men to be in nurturing roles (e.g., mother, caretaker), they may behave in ways that are more communal and less aggressive. Another explanation for such gender differences focuses on men's greater levels of testosterone relative to women, which is associated with greater aggression and dominance (Dabbs and Dabbs, 2000).

Therefore, it may be that, overall, women are less voluble than men in organizations simply because they are less likely to engage in behaviors that are dominant or aggressive, which may include talking more than others in a group setting. In other words, research on gender differences makes a distinct prediction from the power literature in suggesting a main effect of gender on volubility: in general, men will talk more than women, regardless of individual differences in power:

Hypothesis 2: There will be a main effect of gender on volubility such that men will speak for a longer time than women.

The Interaction between Gender and Power on Volubility

A third possibility is that power has a different effect on men and women's volubility. It may be that while men show a strong positive relationship between talking time and power, women show no such effect (or a much weaker one) for at least two reasons. The first stems from the different ways men and women approach leadership and power (Yoder and Kahn, 1992; Eagly and Carli, 2007). Some research has found that women lead (i.e., enact their power) in a more democratic, non-hierarchical fashion than men (Helgelsen, 1995), while men are more sensitive to and more comfortable with hierarchy (Pratto et al., 1997) and may behave in ways that reinforce their position in the hierarchy (e.g., talking more when they have power). In contrast, women may talk to establish and maintain relationships with others (Maltz and Borker, 1982; Coates, 1986; Edelsky, 1993; Gayle, Preiss, and Allen, 1994; Mast, 2002) and therefore would be likely to speak for the same amount of time as their counterparts, regardless of their power.

An alternative explanation, which predicts the same interaction pattern, has to do with women's potential fear of backlash (i.e., social and economic penalties). The status incongruity hypothesis proposes that women, by dint of their mere categorization as women, are assumed to be low in power (Rudman et al., 2012). Therefore when women engage in power-seeking behavior (i.e., power displays), their behavior is judged to be incongruent with their gender, and as a result, women may incur backlash from both male and female perceivers (Rudman, 1998; Heilman and Okimoto, 2007; Brescoll and Uhlmann,

2008). In turn, women's fear of encountering backlash may deter them from engaging in power displays (Rudman et al., 2012). For example, fear of backlash has been shown to explain women's failure to self-promote (Moss-Racusin and Rudman, 2010) and engage in aggressive negotiations (Amanatullah and Morris, 2010). With respect to volubility, though men may be quite sensitive to power hierarchies and associated displays of power, such as talking more than others, even high-power women may avoid dominating a conversation, group meeting or other public setting for fear of experiencing negative consequences (Tannen, 1993).

Hypothesis 3: There will be an interactive effect between gender and power on volubility such that men will show a strong positive relationship between power and volubility, while women will show no such effect (or a much weaker one).

Thus past research makes a number of predictions regarding the effects of power on volubility for men and women, with one literature predicting a main effect of power, another predicting a main effect of gender, and a third predicting an interaction effect. As noted above, this issue is further complicated by the fact that in most social contexts, power and gender are confounded (Dovidio et al., 1988; Sidanius and Pratto, 1999) and in previous research on volubility, power and gender have not been manipulated independently. Therefore the present studies sought to test the predictions outlined above in contexts in which both men and women's power independently varied along quantifiable dimensions. Study 1 tested these hypotheses using field data from U.S. senators. Additionally, two laboratory experiments (Studies 2 and 3) were conducted to establish the causal direction of the effects of power on volubility, as well as the underlying mechanisms.

STUDY 1: GENDER AND VOLUBILITY IN THE UNITED STATES SENATE

Study 1 examined the relationship between volubility and gender and power using archival data from the United States Senate. Specifically, I measured the total amount of time that each senator spent speaking on the Senate floor for the entirety of two different congressional sessions (2005 and 2007) with two different political parties in control (the Republican party in 2005 and the Democratic party in 2007).

This data set was selected for a number reasons. First, although almost all organizations have a formal or informal power hierarchy of some kind, it can be extremely difficult, if not impossible, to quantify that hierarchy. Unlike Congress, most organizations do not have publicly available data that would allow such a detailed quantification. Because the Senate is a public organization whose activity is officially documented by law (via C-SPAN, the *Congressional Record*, etc.), however, most senatorial behavior is observable and therefore subject to study. Second, unlike almost any other organization, the U.S. Senate (via the *Congressional Record* and C-SPAN) keeps records not just of every word that is uttered in the Senate but also of other nonverbal (e.g., smiling, gesturing) and verbal behaviors (e.g., the topics that senators are talking about, whether they use visual aids in their presentation). Finally, this data source is high in ecological validity in that the senators were unaware that anyone was conducting a study on their speaking behavior.

This field study provides the first examination of the relationship between volubility and gender and power in a real-world organization. For example, perhaps among individuals who are generally low in power in society overall (e.g., college undergraduates), the effects of power on volubility are quite different from real-world contexts in which there is considerable variability in the amount of power that individuals hold in their organization. Moreover, these data provided an important opportunity to examine the unique effects of power and gender on volubility, as power could be measured independently from gender in this context.

Method

Predictor variables. The two predictor variables in this study were the gender of the senator and his or her individual power score. Although relative to the lay population, U.S. senators have a tremendous amount of power, there is still considerable variation in individuals' power in that organization.

Power scores for each senator for the years 2005 and 2007 were obtained from Knowlegis, a non-partisan private firm composed of political scientists and former long-term congressional staffers (see http://knowlegis.net). Each power score comprised four components: position, indirect influence, legislative activity, and earmarks. The measure of *Position* consisted of the senators' tenure, leadership positions (e.g., on committees and subcommittees), and committee assignments. Although years of service often determine leadership positions this is certainly not the case universally, as freshman can gain these positions over longer-tenured members. Similarly, committee assignments are crucial to how members can wield power. Being assigned to the Appropriations Committee, for example, is a high-power assignment because that committee determines how much federal money will be appropriated (i.e., actually doled out), regardless of how much money was actually authorized in a particular bill. *Indirect influence* consisted of how much each individual senator was capable of influencing the outcome of votes or the congressional agenda via the media or congressional caucuses. Legislative activity was measured by documenting whether the senator had actually shaped or changed the passage of legislation—not just merely introduced a bill. Finally, *Earmarks* are funds that are approved to be spent on specific projects in a state or district and reflect a senator's ability to direct resources toward his or her own state and away from other states. Each senator's individual power score was constructed by averaging their scores on these four indices.

Dependent variable. *Volubility* was measured by obtaining data from C-SPAN footage (cross-referenced with the *Congressional Record*) on how much time each individual spent talking on the Senate floor (measured separately for 2005 and 2007). What senators choose to speak about on the Senate floor varies widely. It can be anything from introducing legislation to calling attention to a specific issue to engaging in debate with another senator. Importantly, however, in general no senator has any more right than another senator to speak on the floor. The exception to this is the time allotted to the Senate majority leader and the minority leader (or their designees) who are each allotted 10

minutes apiece to conduct "official business," although they do not need to and very often do not use the full ten minutes (Davis, 2007). Otherwise, low-power senators are able to speak on the floor of the Senate as much as high-power senators if they choose to.

Rate of speech. Additionally, past research has found that people who speak slower are seen as higher in power (Gruenfeld, 2010). Therefore it may be that more powerful senators talk at a slower pace, which would be confounded with overall speaking time. To address this concern, two trained research assistants randomly selected five speeches from female senators and five speeches from male senators and coded the rate of speech (1 = extremely slow, 5 = extremely fast; Cohen's kappa = .59).

Results

A regression analysis using the combined data from 2005 and 2007 with year, power scores, senator's gender, and the interaction between senator's gender as independent predictors of talking time revealed a significant main effect of power, $\beta = .38$, $t = 3.18$, $p = .002$, no significant effect for gender, $\beta = .19$, $t = 1.22$, $p = .22$, and a marginally significant interaction between gender and power, $\beta = .33$, $t = 1.68$, $p = .09$.

To examine the nature of the interaction between power and gender, volubility was examined for male and female senators separately for 2005 and 2007. In 2005, there was a significant positive relationship between male senators' power and volubility, $r(87) = .54$, $p < .001$. In contrast, the relationship between power and volubility for female senators was non-significant, $r(12) = .28$, $p = .35$. Similarly, in 2007, the relationship between power and volubility was significant for male senators, $r(82) = .61$, $p < .001$, but not significant for female senators, $r(16) = .28$, $p = .28$. In neither year was there a significant main effect of gender on volubility, consistent with the combined analysis above, nor was there a difference in power scores for male versus female senators.

There was also a significant difference in the overall amount of talking across years, $\beta = .21$, $t = 3.38$, $p = .001$, which was not surprising given that each year, the Senate meets for a different amount of time, leading to natural variations in how much time senators spend talking on the floor.

Similar analyses as above were performed on data for rate of speech, but these analyses showed no effects for gender or power and no interaction.

Discussion

With respect to the hypotheses, the results from Study 1 showed a main effect of power on volubility. This result seems to favor hypothesis 1, that power licenses individuals to speak for disproportionately longer amounts of time in organizations. But the results also indicated an interaction between power and gender on volubility. Although this interaction effect was marginally significant, it is important to note that the number of female senators (N = 14) was small, which affected the statistical power of the study. Furthermore, the correlations between power and gender lend support to this interaction in that, for male senators, the correlation between power and gender was highly significant for

both years, whereas for female senators, the correlation was not significant in either year.

This interaction result supports hypothesis 3, that power differentially affects speaking time for men and women, which may occur either because men and women have different motives for speaking within an organization, reflecting hierarchical relationships versus establishing rapport with others, or because women are concerned about the potential backlash stemming from appearing to talk too much. In contrast, there was no main effect of gender on volubility, and therefore hypothesis 2 was not supported by this study. Additionally, it is important to note that in this sample, men and women did not differ in their overall level of power, which is consistent with the notion that this particular data set was unique in its ability to disentangle the effects of power and gender.

Although the results are thought-provoking, this study was correlational and therefore could not address questions about the direction of the effect, such as whether power causes men to talk more or whether talking disproportionately more than others leads men to gain power. In the case of the Senate, it seems likely that power increases volubility, rather than the other way around. An individual senator can obtain power in many ways, including fundraising, making behind-the-scenes deals with other members of Congress, etc. Therefore, given the multiple routes to obtaining power in the Senate, it seems unlikely that merely talking more on the Senate floor would cause an individual senator to gain power in any significant way. Nevertheless, Study 2, a controlled experiment, was conducted to test the causal relationship between power and volubility and further explore the interaction between gender and power on volubility as well as the underlying reasons for it.

STUDY 2: EXPERIMENTAL MANIPULATION OF POWER

Results from the U.S. Senate data indicated an interaction between power and gender on volubility. Specifically, male senators showed a strong positive relationship between power and speaking time, while female senators did not. One question surrounds the causal direction of this effect: does power in fact cause men to increase their volubility? To examine this, Study 2 experimentally manipulated power for male and female participants and measured the resulting effects on volubility.

A second question concerns the underlying reasons why power may have different effects for men than for women. As outlined in the introduction, one explanation of this interaction is that while men are more comfortable with hierarchy (Offerman and Schrier, 1985) and will actively engage in behaviors that communicate their power to others, women are likely to enact their power in a more democratic, non-hierarchical fashion (Helgelsen, 1995). Thus men may behave in ways that reinforce their position in the hierarchy, whereas women may talk to establish rapport with others and therefore would be likely to talk for the same amount of time as their female counterparts, regardless of their power (Maltz and Borker, 1982; Coates, 1986; Edelsky, 1993; Gayle, Preiss, and Allen, 1994; Mast, 2002).

An alternative explanation, however, is that high-power women are not as voluble as their male counterparts because they are concerned about the potential backlash that may result from talking too much. Rudman and

colleagues' (2012) status incongruity hypothesis proposes that women are assumed to be low in power, and therefore women may incur "backlash" when they engage in power-seeking behavior (Okimoto and Brescoll, 2010). In turn, fear of backlash may lead high-power women to avoid talking disproportionately longer than others for fear of experiencing negative consequences.

These competing hypotheses can be distinguished in two ways. The first method is via different predictions about the overall level of talking time as a function of gender and high versus low power. Specifically, an explanation based on women's desire to establish rapport with others predicts that, relative to men, high-power women should reduce their talking time while low-power women should increase their talking time. Therefore, women, regardless of power, will talk for the same amount of time, which should be less than high-power men and more than low-power men. In contrast, an explanation based on fear of backlash predicts that only high-power women will regulate their volubility, such that their talking time should be equivalent to low-power women as well as low-power men (which should all be less than high-power men). In short, a rapport explanation predicts that both low- and high-power women will adjust their talking time, relative to men, whereas a fear of backlash explanation predicts that only high-power women will adjust their talking time, relative to men.

A second means of testing these competing hypotheses is to explicitly measure the desire to establish rapport and fear of backlash and conduct mediation analyses to determine which underlying construct explains the differential effects of power on volubility for high-power men versus high-power women. Moss-Racusin and Rudman (2010) recently developed a fear of backlash scale, which has been shown to explain women's failure to self-promote. Thus, in Study 2, participants completed Moss-Racusin and Rudman's (2010) scale to assess fear of backlash as well as additional items specific to talking time. A second scale was also developed to measure the extent to which talking time was explained by a desire to establish rapport with others.

Method

Participants and procedure. Two hundred and six adult participants (mean age = 38.1, 59 percent female) were recruited from an online research database maintained by a northeastern university. The sample was restricted via pre-selection to participants who had workplace experience. Participants worked in a variety of occupations, and their median level of education was relatively high ("some college").

Participants were asked imagine themselves as part of a team at work and then answered a series of questions about the likelihood of engaging in a number of behaviors during a meeting. Participants were randomly assigned to imagine either that they were the most powerful person in the meeting (high-power condition) or the least powerful member in the meeting (low-power condition). Participants randomly assigned to the high-power condition read as follows:

> Imagine that you are a member of a four-person team of men and women trying to generate a marketing strategy for an emerging consulting firm. Of the four people on

your team, you have the most power and are therefore very likely to have influence over the final decision that your team makes.

In the low-power condition, the manipulation read as follows:

Imagine that you are a member of a four-person team of men and women trying to generate a marketing strategy for an emerging consulting firm. Of the four people on your team, you have the least power and are therefore unlikely to have influence over the final decision that your team makes.

Dependent measures. To measure *volubility*, after being exposed to these manipulations, participants were given a list of behaviors and were asked to indicate the likelihood that they would engage in these behaviors (1 = not at all likely, 7 = extremely likely). Four behaviors were specific to volubility and three behaviors were filler items so as not to alert participants to the fact that the study was specifically about volubility and power. The volubility behaviors were as follows: "Of the four people in your group, I would: "Talk more than the other group members," "Spend more than the average amount of time talking compared to your other team members," "Make a lot of vocal contributions to the discussion," "Make sure to talk a lot so others will hear your points" (α = .89). The filler behaviors consisted of "Be a reliable team member," "Try to get things done as efficiently as possible," and "Make an effort to see that the marketing strategy your team generates is truthful."

Mediating measures. To assess individuals' concern for *potential backlash*, Moss-Racusin and Rudman's (2010) fear of backlash items were used, with some adapted specifically for volubility. The items included "Would you be concerned that you might be disliked?," "Based on how you talked during the meeting, did you think about whether someone would think that you were acting 'out of line'?," "Would you be concerned that people would judge you for how much you talked?," "Would you worry that people thought you dominated the meeting?," and "Based on how much you talked, would you think that others would perceive you as too controlling?" To further assess concern over consequences, two items were added that assessed whether individuals would feel they would lose power: "Do you think that how much you talked in the meeting would cause you to lose power?," and "Do you think that how much you talked during the meeting would make you seem less effective?" All items were assessed using an 11-point scale on which 1 = not at all and 11 = very much so. Together, these items formed a reliable scale (α = .93).

Establishing rapport. To test the hypothesis that women's volubility stems from a desire to establish rapport, participants were asked to think about their goals in the meeting in relation to their talking behavior, with the following stem: "In deciding how much to talk, would you have the following goals?" The items included "Connect with others in the meeting," "Establish a rapport with my colleagues," "Let my team know I value the group's discussion," "Get to know others in the meeting," and "Signal that I want our group to succeed." Responses were made using a 7-point scale, on which 1 = not at all, and 7 = very much so, and formed a reliable measure (α = .90).

Funneled debriefing. At the end of the study, participants were asked to predict the hypotheses of the study and to list their thoughts about what the study might have been about. No participant was aware of the true purpose of the study.

Results

Volubility. A 2 (participant gender: male vs. female) x 2 (power prime: high vs. low) ANOVA indicated a significant interaction between gender and power, $F(1, 202) = 8.15$, $p < .01$. Specifically, men in the high-power condition (mean = 4.68, S.D. = 1.11) reported that they would talk more than men in the low-power condition (mean = 3.27, S.D. = 1.22), $F(1, 84) = 30.42$, $p < .001$. In contrast, women in the high-power condition (mean = 3.87, S.D. = 1.30) reported that they would talk equally as much as women in the low-power condition (mean = 3.52, S.D. = 1.47), $t(120) = 1.40$, n.s. Moreover, specific comparisons revealed that only high-power women appeared to adjust their volubility such that their reported talking time was equivalent to low-power women, (as just reported) as well as low-power men $t(95) = .85$, n.s., and all three conditions were significantly less than the high-power men, $t(202) = 5.15$, $p < .001$, via a planned contrast analysis. This pattern of results is consistent with the fear-of-backlash explanation, which predicts that only high-power women will adjust their volubility.

There was also a significant main effect of the power manipulation on predicted volubility, $F(1, 202) = 22.61$, $p < .001$, but this main effect was driven by the high-power male participants (as revealed by the significant interaction effect). There were no main effects of power or interactions between the power and gender on any of the filler items (all ps $> .86$).

Mediating variables. Female participants' concerns over backlash mediated the effects of power on volubility. Specifically, looking at the difference between male and female participants in the high-power conditions, participant gender was significantly related to volubility, $\beta = -.32$, $p < .001$, as was fear of backlash, $\beta = -.39$, $p < .001$, and these two variables were significantly related to each other, $\beta = .36$, $p < .001$. When both participant gender and fear of backlash were included as independent predictors of volubility, only the coefficient for backlash remained significant, $\beta = -.32$, $p < .001$. The coefficient for participant gender fell from .31 to .20, Sobel $z = 2.08$, $p < .05$.

In contrast, the desire to establish rapport did not mediate the effects of power and gender on talk time. Overall, women (mean = 5.74, S.D. = 1.05) were more likely than men (mean = 5.26, S.D. = 1.31) to say that they would want to establish rapport with their colleagues, $t(204) = 2.99$, $p < .001$, but this difference was not related to volubility. When both the desire to establish rapport and fear of backlash were included in the same regression model, the effect of rapport was not significant, and concern over backlash remained significant, suggesting that concern over backlash explains why high-power women talk less than high-power men, whereas the desire to establish rapport does not.

Discussion

Results from Study 2 demonstrated that independently manipulating power has different effects on men's and women's reported volubility. As observed in the Senate data from Study 1, male participants in Study 2 showed a significant positive effect of power on volubility, whereas female participants did not. This result is important because it replicates the interaction effect in a different population and organizational context and also establishes a causal link between increases in power and subsequent effects on volubility (for men).

Moreover, the particular pattern of results in Study 2 sheds light on the underlying reasons for this interaction effect. Only high-power women appeared to adjust their volubility such that their reported talking time was equivalent to low-power women as well as low-power men. This pattern is consistent with predictions stemming from a fear-of-backlash explanation and is distinct from the predictions based on differences in wanting to establish rapport. The fear-of-backlash explanation was further supported in mediation analyses. In short, though women did express a greater desire than men to establish rapport, only fear of backlash mediated the differential effects of power on volubility for high-power men versus high-power women.

A remaining question from this study concerns the extent to which self-reported measures of volubility map onto actual behavior. Given that the results of Study 2 were consistent with the actual behaviors exhibited by senators in Study 1, there is good reason to believe that the same interaction pattern should be replicated in an experimental context measuring actual talking behavior, though future research should examine this issue directly.

STUDY 3: IS FEAR OF BACKLASH JUSTIFIED?

Studies 1 and 2 found an interaction between gender and power on volubility such that men show a strong positive relationship between power and volubility, while women show no such effect. The results of Study 2 demonstrated that this difference is explained by women's concern about incurring backlash from appearing to talk too much. The goal of Study 3 was to examine whether this fear of backlash is in fact justified: Are high-power women evaluated negatively when they talk disproportionately more than others?

A second question concerns the source of potential backlash. This is a nuanced point about the nature of backlash effects. One interpretation is that men judge highly voluble women negatively because (in general) men are higher in power and therefore perceive women's power displays as a threat to their own power. In other words, it may be that women talk less solely because they are concerned about negative evaluations from male perceivers. A tenant of the status incongruity hypothesis, however, is that backlash stems from the more general incongruity between existing gender hierarchies and behaviors that display power. This theory predicts that both male and female perceivers should be equally likely to show backlash effects (Rudman et al., 2012) and thus should have equivalent negative evaluations of increased volubility in high-power women.

Method

Participants and procedure. Participants were 156 adults (mean age = 36.9, 45 percent female) who were recruited from the same online research database as Study 2. This study consisted of a 2 (target gender) x 2 (talking more vs. less) x 2 (participant gender) between-subjects design, with participants randomly assigned to one of four experimental conditions.

Participants first read a brief bio-sketch about a chief executive officer (CEO) and then completed the manipulation check and dependent measures. Besides changing the gender of the CEO named in the bio-sketch (either Jennifer or John Morgan), the bio-sketches were altered such that the CEO was presented as talking more or less than average in his or her workplace interactions. Specifically, at the end of the high-volubility bio-sketch, the stimuli read as follows:

> Analyses of Mr. (Ms.) Morgan's interpersonal style in meetings have revealed that he (she) tends tooffer his (her) own opinions as much as possible. Compared to other CEOs, Mr. (Ms.) Morgan talks much more than others in power.

In the low volubility condition, the bio-sketch read as follows:

> Analyses of Mr. (Ms.) Morgan's interpersonal style in meetings have revealed that he (she) tends toto withhold his (her) own opinions. Compared to other CEOs, Mr. (Ms.) Morgan talks much less than others in power.

Manipulation check. To insure that participants attended to the power manipulation, they completed three recall items: "What job does this person hold?" "According to analyses of the individual, did this person speak more or less than his or her colleagues?" and "What was the gender of the person you just read about?" All participants successfully completed the manipulation check.

Dependent measure. Using 7-point scales, subjects rated the CEOs in terms of their suitability for leadership. Items included "If it were up to you, would you hire this person as the CEO?," "How much power do you think this individual is entitled to?," and "Do you think this person will go on to achieve a higher position and more power in the future?" Additionally, participants rated the overall competence of the CEOs on the dimensions of competent, knowledgeable, and effective (1 = not at all, 7 = very much so). These items formed a reliable scale and were averaged to produce a single measure (α = .80).

Results

A 2 (target gender) x 2 (high vs. low volubility) x 2 (participant gender) ANOVA revealed a significant interaction between target gender and volubility, $F(1,147) = 18.42$, $p < .001$. Specifically, comparison across the gender of the target revealed that participants gave significantly lower ratings to the female CEO when she was reported as being high in volubility (mean = 4.83, S.D. = 1.36) than when she was reported as being low in volubility (mean = 5.62, S.D. =

.60), t(76) = 3.24, $p < .01$. In contrast, participants gave significantly lower ratings to the male CEO who was reported as being low in volubility (mean = 5.11, S.D. = .87) compared with the male CEO high in volubility (mean = 5.64, S.D. = .70), t(76) = 2.96, $p < .01$. A further comparison across gender revealed that participants gave significantly lower ratings to the female CEO who was high in volubility than the male CEO who was high in volubility, t(80) = 3.35, $p < .001$. No other main effects or interactions were observed, and further analyses revealed that both male and female participants showed the same pattern of results (all ps $< .05$).

Discussion

Results from this study are informative for multiple reasons. First, these results suggest that high-power women are in fact justified in their concern that they will experience backlash from being highly voluble: a female CEO who talked disproportionately longer than others was rated as significantly less competent and less suitable for leadership than a male CEO who was reported as speaking for the same amount. Second, this effect did not interact in any way with participant gender in that both male and female participants were equally likely to exhibit backlash effects. This result lends further support to the status incongruity hypothesis and the notion that backlash effects result in beliefs about existing gender hierarchies that are shared among both male and female perceivers (Rudman et al., 2012).

Two additional findings emerged from these data. Specifically, a high-power woman who talked much less than others was judged as equally competent/deserving of leadership as a high-power man who talked much more than others. Similarly, a high-power male who talked much less than others was judged to be equally incompetent/undeserving of leadership as the high-power female who talked much more. Though speculative, this result suggests that the prescriptions for powerful men's and women's talking behavior may be much more comprehensive than originally hypothesized (i.e., powerful men *should* display their power, while powerful women *should not*).

GENERAL DISCUSSION

The results of three studies revealed a number of novel findings about the nature of power, gender, and volubility in organizations. Study 1 utilized data from the U.S. Senate, a real-world organization, and found a significant relationship between power and volubility on the Senate floor. This effect, however, was qualified by a marginal interaction between power and gender, such that male senators showed a significant relationship between power and volubility, while female senators did not.

Study 2 built on these findings using an experimental design in which power was directly manipulated. Consistent with the Senate data, there was a significant positive effect of power on volubility for male participants but not for female participants. Thus this experiment replicated the interaction effect found in Study 1 while also demonstrating a causal link between power and subsequent increases in volubility for men.

Furthermore, Study 2 helped to identify the underlying reasons for this difference between men and women. The results suggested that women do not

show an effect of power on volubility because they are concerned about the potential backlash that may result from appearing to talk too much. Examination of the specific pattern of data revealed that only high-power women adjusted their volubility such that their reported talking time was virtually identical to low-power women and low-power men, a pattern that is consistent with a fear-of-backlash explanation, rather than an explanation based on differences in men and women's desire to establish rapport. Additionally, subsequent measures indicated that while women did express a greater desire to establish rapport than men, only fear of backlash mediated the differential effects of power on volubility for high-power men versus high-power women.

Study 3 then examined whether powerful women are justified in their fear of experiencing backlash. Results showed that a female CEO who talked disproportionately longer than others in an organizational setting was rated as significantly less competent and less suitable for leadership than a male CEO who talked for an equivalent amount of time. Importantly, this effect was found among both male and female perceivers, which lends further support to the status incongruity hypothesis and the idea that backlash effects result from beliefs about existing gender hierarchies that are shared among both men and women (Rudman et al., 2012). Study 3 also revealed that a male CEO who was low in volubility was seen as less competent and suitable for leadership than his highly voluble male counterpart, while a female CEO who was low in volubility was equally competent and deserving of leadership as a highly voluble male CEO. Though future research is necessary to explore this issue further, such a finding raises the interesting possibility that the expectations that individuals should behave in ways that conform to existing gender hierarchies may apply equally to women and men—a hypothesis that naturally follows from the status incongruity hypothesis but one that has received limited attention in the backlash literature.

Contributions to the Existing Literature

The findings from these studies make a number of novel methodological and theoretical contributions. Study 1 is the first field study to examine whether objective measures of power and speaking time are related in a real-world organization. This is important because past research using college student samples are limited in their ability to generalize to organizational settings. Further, this study used objective indices of power (as opposed to subjective assessments), which are advantageous in that they allow for a more reliable, replicable measure that captures individual variations in power.

Second, because men and women in the Senate held equal levels of power, the study has the unique ability to help disentangle the effects of power and gender on volubility. Likewise, Study 2 also disentangled power and gender by manipulating power and measuring its effect on participants' volubility. This is a critical point for understanding the effects of power and gender on volubility, as power and gender are naturally confounded (Sidanius and Pratto, 1999). In fact, a review of the literature reveals that no previous study has independently manipulated power in an analysis of gender differences in volubility (see James and Drakich, 1993, for a review). Therefore, to accurately assess the extent to which gender and power independently contribute to volubility (or potentially interact), it is necessary to measure or manipulate power independent of gender, which was accomplished in Studies 1 and 2.

Third, these results may have important consequences for understanding the effects of power on behavior. As noted in the introduction, although past studies have found that experimental manipulations of power have an equivalent effect on both men and women, results of the present studies show that power has an interactive effect with gender on volubility (Studies 1 and 2). What explains this difference? One account is that volubility is distinct from other approach-type behaviors typically examined in the power literature (e.g., turning off a noisy fan, changes inperceptions of control, attending to goal-relevant information, etc.) in that people are, in some sense, aware of the "licensing" effect of power on volubility and the fact that talking disproportionately more than others may explicitly communicate power in an organizational setting. In turn, powerful women may actively avoid such behaviors because they are also aware of the negative backlash that may result if they are seen as challenging culturally held beliefs about existing gender hierarchies, as supported by the mediation measures of Study 2. Taken together, this analysis indicates that power should have an equivalent effect on men and women when the behavior in question does not explicitly communicate power to others (i.e., there is not an existing lay theory that the behavior in question is a power display), but an interaction with gender when the behavior does. Though speculative, this distinction provides a testable prediction that may be born out by future research.

Finally, this research has the potential to inform a more nuanced understanding of backlash effects. Effects on volubility are distinct from other backlash effects in that volubility is not a discrete event or behavior (e.g., directly asking for a promotion, initiating a negotiation, getting angry), but rather, it reflects a general appraisal about behavior over time. This suggests that backlash (or perhaps fear of backlash) not only operates at the level of individual prescriptions (what people should and should not do) but also at higher-level guidelines for behavior over time, which is arguably much more complex to monitor.

Conclusion

When Hillary Rodham Clinton began her campaign for the Senate in New York State in 1999, one of the first things she did was to embark on a very well-publicized "listening tour." She spent valuable political months visiting nearly every county in New York State. Obviously, she needed to win over voters in a state in which she had only resided for a matter of months. But more than that, the listening tour clearly signaled that she was going to listen and *not* talk at the voters—i.e., stay relatively silent while they told her what they needed from a senator. And, ironically, when Clinton engaged in a low-power behavior (i.e., listening rather than talking), she was given a great deal of power by virtue of being elected to office.

The present studies shed some light on why Clinton's strategy was successful and perhaps why a male politician might not engage in a similar "listening tour," but beyond this particular example, these data suggest that even "regular" women without political experience are acutely aware of the fact that talking more than others at work may not be a successful way to communicate their power to others. From the vantage of psychological processes, this result highlights an instance in which power does not appear to have an equivalent effect on men and women's behavior, and from the vantage of women's ability

to achieve success within an organization, it suggests that existing power hierarchies may be quite difficult for women to navigate and may require some creative strategies that may work better for them than for men.

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