THE MODERATING EFFECT OF SOCIO-EMOTIONAL FACTORS ON THE RELATIONSHIP BETWEEN STATUS AND INFLUENCE IN STATUS CHARACTERISTICS THEORY

Shahar Gur
University of North Carolina at Charlotte

Chelsea Beveridge
University of North Carolina at Charlotte

Lisa Slattery Walker
University of North Carolina at Charlotte

ABSTRACT

The goal of this study is to test whether negative socio-emotional factors intensify the relationship between status characteristics and the degree of the resistance to influence in a task group setting. We conducted an experiment to collect behavioral and attitudinal data on the resolution of disagreements. We ran a moderated regression analysis and graphed simple slopes to examine the moderating effect of negative socio-emotional factors on the relationship between status and resistance to influence. The graph of the simple slopes suggests that a moderation effect may exist. Implications of the potential moderating relationship as related to leadership behavior are discussed.

INTRODUCTION

The goal of this study was to test whether negative socio-emotional factors, which are emotional responses that are elicited from interactions with others, intensify the relationship between status characteristics and resistance to influence. Status characteristics theory fits under the broader category of expectation states theories, which is a meta-theoretical framework that focuses on how groups solve problems and make decisions (Berger, 1958; Berger & Webster, 2006). Status characteristics theory focuses on the effects of status-based characteristics on outcomes in task-based and collectively-oriented groups.

Status characteristics theory research generally uses experimental methods to test the ways in which external status information (e.g., gender, age) influences participants' expectations of their

partners' performance when working on a certain task as a team.[1] In most studies testing status characteristics theory, people of differing status levels are assigned to teams; the influence held by one or several group members (i.e., members of higher status) is said to be derived from taken-for-granted and unconscious expectations of how each member will contribute to the task based on social group membership (Kalkhoff & Thye, 2006).

Status beliefs are the shared ideas in a culture that associate skills or competency levels with a state of a characteristic (Ridgeway, 2001). Berger, Cohen, and Zeldich (1972) describe two types of status characteristics: specific and diffuse. Specific status characteristics are attributes that directly relate to a particular task. Diffuse status characteristics, the type emphasized in the present study, are salient across a wide domain of tasks. There are many examples of diffuse status characteristics in our society, such as age and race. In this study, gender is the focal diffuse status characteristic.

Cultural beliefs on gender signify that the state of being male is ranked higher than the state of being female, and males are expected to be more competent than females at tasks in general (Lockheed & Hall, 1976; Ridgeway, 2001). These status expectations pose potential adverse consequences in the form of noncompliance and dislike whenever females behave in a manner that is inconsistent with what is expected of their status in mixed-sex contexts (Carli, 1990; Ridgeway, 2001; Ridgeway, 2011). More specifically, Ridgeway (2001) discusses how gender as a status characteristic greatly shapes one's performance expectations and perceptions of leadership such that females who appear as more assertive also appear as less likeable (see also Rudman & Glick, 2001). Additionally, Lucas and Lovaglia (1998) found that female-led groups were seen as less effective to their male-led counterparts. Previous work on emotions also found that participants react to male and female leaders differently (Lucas & Lovaglia, 1998). Bianchi and Lancianese (2007), on the other hand, propose that females use positive emotions to compensate for being a low-status member of the group and gain influence as a leader. Finally, a study by Lovaglia and Houser (1996), who also used gender as the focal diffuse status characteristic, found that status combined with emotional responses influenced the participants' resistance to influence.

This study examines the moderation effects of socio-emotional components as they relate to the effects of status on resistance to influence (see Figure 1). We define socio-emotional factors as responses that are emotionally-charged based on interactions with other people. Based on findings by Ridgeway (2001), we propose that socio-emotional factors will exert more influence on resisting behavior for higher-status partners when compared with their lower-status counterparts. That is, negative socio-emotional reactions will intensify the relationship between status characteristics and resistance to influence such that higher-status partners with a higher level of a negative emotional response to a disagreeing partner who is of lower-status will become more resistant to influence above and beyond status effects alone.

Figure 1. The Proposed Moderating Effect of Socio-Emotional Factors on the Relationship Between Status Characteristics and the Resistance to Influence.
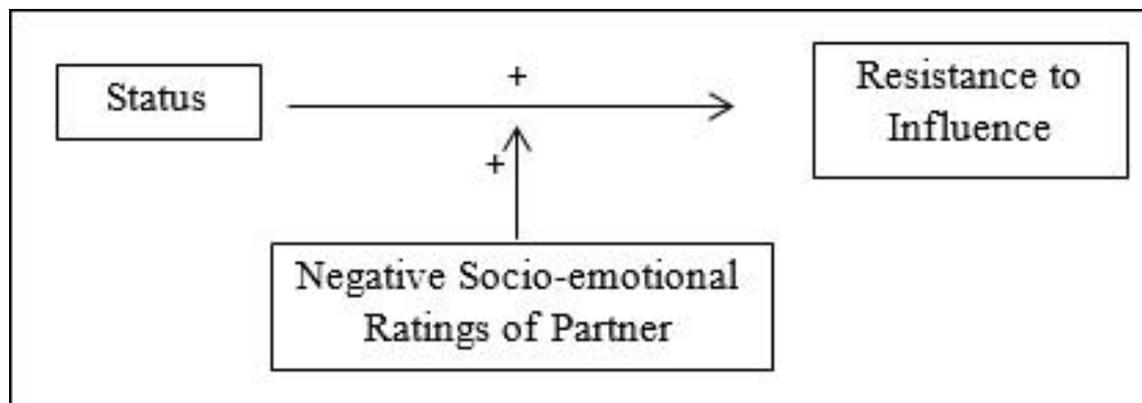
Additionally, we propose that for people with lower status, the same negative socio-emotional factors will not change the intensity of the relationship between status characteristics and resistance to influence because lower-status partners are accustomed to having their opinions challenged by higher-status partners, especially when gender is the salient status differentiator (Ridgeway, 2001). Therefore, we propose:

Hypothesis 1: The relationship between status and resistance to influence is intensified by socio-emotional factors such that higher levels of negative socio-emotional response will lead higher-status partners to become more resistant to influence than they would otherwise be.

Hypothesis 2: For lower-status partners, socio-emotional factors will not change the effect of status on resistance.

METHODS

Study participants (N= 58, female = 55 percent) were college students ages 18 to 22 at a university in the southeastern United States who were paid for their time. The experimental task used in this study was contrast sensitivity (Berger et al., 1972). In this task, participants believe that they are interacting with a partner who is in a different room, when in fact they are shown a video recording of a confederate and the partner's responses to the task are computer-generated. Once introduced, the participants begin the contrast sensitivity task on the computer. The task shows a screen full of white and black rectangles of varying sizes and the participants are asked to make a binary decision as to whether the majority of the screen is black or white. This task was designed to be ambiguous in order to focus on the effects of status differences.

In our study, participants always worked with a purported partner of the opposite gender, which creates a difference in status between partners such that male subjects are of higher status and female subjects are of lower status. After the participants have chosen an answer, the computer prompts the participants by showing what their partners have chosen. Then, the participants are told to choose a final answer by either keeping or changing their original answer. Resistance to influence is measured by the number of times the participants stayed with their original response during a disagreement trial. This is called the proportion of "stay" response, or P(s). For example, if a participant chose to stay with his original responses 16 out of the 20 critical trials, it

would mean that his P(s) value would equal 0.80. A high P(s) value means that the participant was highly resistant to influence from his partner.

Questionnaire Items

After the task, participants completed a questionnaire taken from a standard set of items used with this experimental protocol (e.g., Rashotte & Webster, 2007). This study uses three items that ask participants to rate their partners on traits related to socio-emotional factors: assertiveness, likability, and fairness. Each of the items was measured on a 7-point Likert-type scale. A high value indicates a high negative emotional reaction to the partner.

RESULTS

We conducted a moderated multiple regression analysis to test our hypothesis that the relationship between status characteristics and the proportion of stay responses is moderated by socio-emotional factors. We first conducted a confirmatory factor analysis to ensure that the three items (assertiveness lambda=0.61, likability lambda =0.79, and fairness lambda =0.75) captured the same latent variable: socio-emotional factors. Next, a composite socio-emotional score was created from averaging the three items, which was mean-centered to aid in interpretation and then used in further analyses.

Table 1. Means, Standard Deviations and Zero-Order Correlations among Study Variables

	M	SD	1	2	3
1. Status	0.45	0.50	--		
2. Socio-emotional score	2.70	0.55	-0.18	--	
3. P(s)	0.53	0.20	0.73^{*}	-0.04	--

$N = 58$. $^{*}p < .001$. Status is coded as: 1 = high status (male subjects with female partners), 0 = low status (female subjects with male partners). Socio-emotional score is an average of: unassertive, unlikeable, and unfair. P(s) is calculated as the number of "stay" responses divided by the number of critical trials.

Means, standard deviations, and zero-order correlations of the study variables are presented in Table 1. The mean P(s) and socio-emotional scores for each gender are shown in Table 2. All means were within a reasonable range and all standard deviations included acceptable variability in our data. For our regression analysis, P(s) ($M = .53$, $SD = .20$) was the criterion variable that was regressed onto the composite of socio-emotional factors ($M = 2.7$, $SD = .55$), gender (female = 55 percent; female coded as "0"), and their interaction term.

Table 2. Mean Scores for Each Status on P(s) and Socio-Emotional Factors

Status	N	P(s) Mean	Socio-emotional Mean
Low	26	0.37	2.68
High	32	0.67	2.72

$N = 58$, P(s) = proportion of stay response.

Initial analyses reveal that P(s) was significantly, positively correlated with status (r = .73, p < .01), such that being a higher-status (i.e., male) is associated with a higher rate of stay response and therefore a higher rate of resistance to influence from their partners, as expected. The socio-emotional score was not significantly correlated with either status (r = -.18, p > .05), or P(s) (r = -.04, p > .05). These findings suggest that socio-emotional factors do not predict P(s) alone, but the possibility that this relationship is dependent on status remains plausible.

Due to the nature of the socio-emotional factors (i.e., responses were given on a scale of 1-7), mean centered values were computed for the socio-emotional score in order to make the results more interpretable. Since status was a dichotomous categorical variable (i.e., high or low) and proportion of stay response was a ratio (i.e., a score of "0" is both realistic and interpretable), these variables were used in analyses in their raw form. The interaction term was created using the centered socio-emotional term for ease of interpretation.

Table 3. Moderated Regression Results Predicting P(s)

Model		b	S.E.	Beta	R-squared	F
Step 1					0.56	34.72[*]
	(Intercept)	0.66	0.02			
	Condition	-0.30[*]	0.04	-0.72		
	Socio-emotional score	0.06	0.03	0.16		
Step 2					0.57	23.88[*]
	(Intercept)	0.66	0.02			
	Condition	-0.30[*]	0.04	-0.72		
	Socio-emotional score	0.09[**]	0.04	0.24		
	Interaction term	-0.085	0.07	-0.14		

$N = 58.$ [**]$p < .05$; [*]$p < .001$. Socio-emotional score is based on mean centered data.

We ran a two-step hierarchical regression to test for the potential moderating effect of socio-emotional factors on the relationship between status and P(s) (Table 3). In the first step, the centered socio-emotional composite and the status variables were entered into the model. This model explained 55.8% of the variance observed in the proportion of stay response (R-squared = .558, F (2, 55) = 34.72, p < .01). This model alone explained a very large amount (over half) of the variance in the dependent variable, P(s), and is consistent with previous findings in the literature (Kalkhoff and Thye 2006).

In the second step, the interaction term (socio-emotional by status) was entered into the model. The total variance explained by the second model is 57% (R-squared = .570, F (3, 54) = 23.88, p > .05), which does not show a significant change from the first model (delta R-squared = .012, p > .05). This finding indicates that the second model does not significantly explain an additional amount of variance above and beyond what was explained in the first model. For a moderation effect, however, an additional 1.2% of explained variance is worthy of further examination

because interaction effects are best discovered when graphed (Cohen et al. 2003). Thus, we computed and plotted the simple slopes in Figure 2.

Figure 2 shows that, albeit small, there is practical support for the moderating effect of socio-emotional factors on the relationship between status characteristics and P(s). Overall, low-status (i.e., female) participants tended to change their original responses more often than high-status (i.e., male) participants, as expected. For low-status participants, the slope of the line indicates that the levels of P(s) do not change much depending on the level of socio-emotional factors rated by the participant. Hence, for low-status participants working with high-status partners, socio-emotional factors do not affect their degree of resistance to influence. On the other hand, for high-status participants, the slope of the line shows that as the negative socio-emotional scores increase, so do the levels of P(s). That is, the more unassertive, unlikable, and unfair their lower-status partner appears, the more high-status participants become resistant to influence.

Figure 2. The Moderating Effect of Negative Socio-Emotional Ratings on the Relationship between Status Characteristics and Proportion of Stay Responses (P(s)).
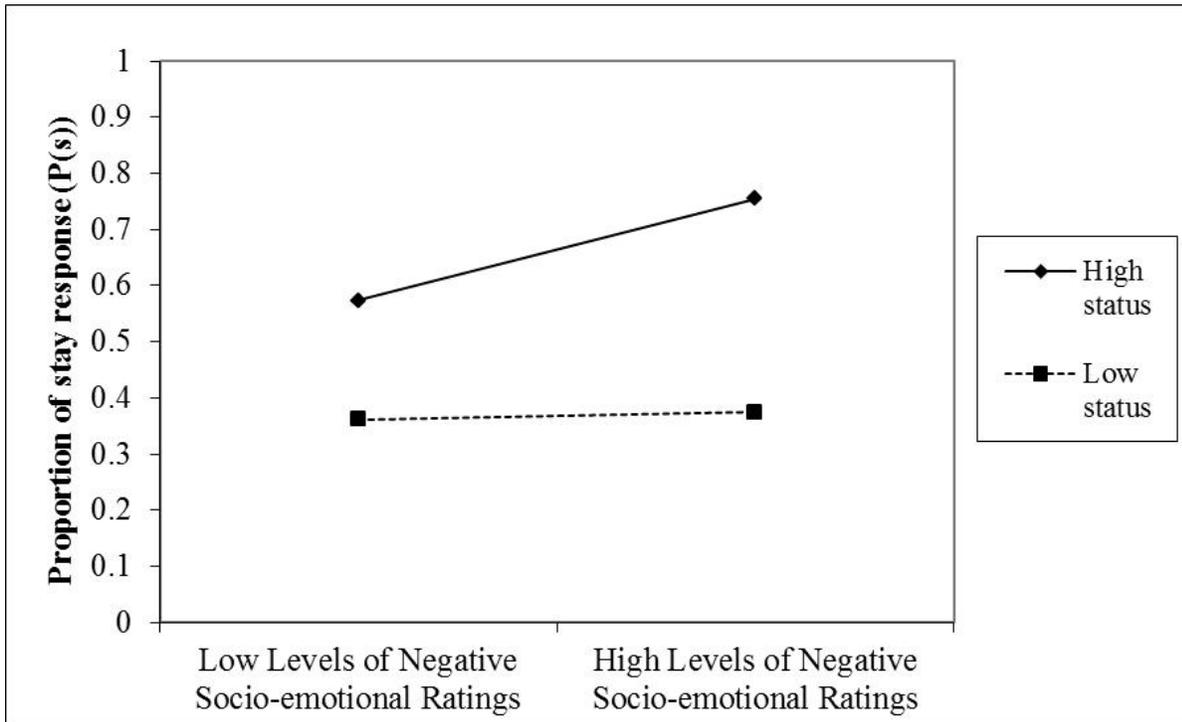
Our findings indicate practical support for an interactive effect such that socio-emotional factors moderate the relationship between status and P(s). In other words, the moderation of socio-emotional factors on the resistance to influence depends on status: belonging to the higher-status group activates the effect of socio-emotional factors and fortifies the relationship between status and resistance to influence, while being of lower-status does not.

DISCUSSION

Our results provide limited support that there is an interactive effect between socio-emotional factors and status characteristics when predicting resistance to influence in a dyadic task. High-status individuals working with lower-status partners are more likely to stick to their original responses on the contrast sensitivity task when they think their partners are less assertive, less likeable, and less fair. However, lower-status individuals who work with higher-status partners are not affected by socio-emotional factors when deciding whether to stick to their original responses.

The overall results for this study are congruent with previous research on status characteristic theory. In particular, we supported the postulation that males are more likely to have an emotionally-laden reaction to female partners' disagreements (Ridgeway, 2001). For high-status participants in our study, the more they rated their lower-status partners as unassertive, unlikable, and unfair, the more they tended to stick to their original answer; this may be an example of high-status individuals displaying frustration with or disinterest in their lower-status partners' opinions, especially if it seems that their original responses are being challenged.

Interestingly, the contrast sensitivity task creates a scenario in which partners are presented as at least somewhat assertive because they disagree with the participant's original response for the majority of the trials. As such, it may be expected that participants generally view their partners as more assertive, which is confirmed by the mean ratings in each condition for partner assertiveness (see Table 2).

Implications

The first implication of the current study relates to teamwork in general. Our findings suggest that partners with higher status will resist partner influence when they perceive their lower-status partners as possessing more negative socio-emotional traits (i.e., unassertive, unlikable, and unfair). One possibility for this reaction stems from the idea that a higher-status person may not see an unassertive, unlikable, and unfair partner as a partner whose opinion they value. More plainly, if someone generally does not enjoy working with their partner, they are not likely to compromise or change their own answers to match those of their undesirable partner.

Additionally, our findings could have implications for variation among leaders. While we argue that leaders inherently have higher-status through their hierarchical position within an organization, it can also be reasoned that there are status levels among leaders based on characteristics other than organizational role (i.e., gender, race, age). In the context of this study's findings, this could have interesting implications for leaders' reactions to disagreement from lower-status leaders or subordinates. A high-status leader (i.e., male, white, older) may have a more negative reaction to disagreement from organizational members who are of a lower status on some characteristic and additionally perceived as unassertive, unlikeable, and unfair. In such a situation, this leader may react by being less willing to compromise and sticking more strongly to their original answer, effectively discounting or ignoring the input of the lower-status group member.

We attribute our findings to performance expectations due to status and not gender differences because status is the focal component of the contrast sensitivity task. Although gender is the

characteristic used to signify status in this task, status characteristics theory states that it is the status derived from gender that gives this characteristic significance rather than gender itself. Thus, this experiment focused on gender as the status differentiator with promising results. Future studies could look at other status characteristics to see if the moderation pattern is particular to gender status beliefs. Such research would shed light on how socio-emotional reactions may moderate other status – influence relationships.

Limitations

A limitation to the study is the small sample size (N = 58). This may explain why the change in R-squared was not significant in the regression analysis, but the moderation effect appeared clearer in the simple slopes plot. It is possible that the moderation effect would be more pronounced if tested on a larger sample. Future studies examining this moderation effect should use larger samples.

Additionally, this study used a composite measure of socio-emotional factors for three variables: assertiveness, likability, and fairness. For this study, a composite measure was used, in part, because each variable was only measured using one item. Future research should use more complex, multi-item measures of each of these socio-emotional factors. Not only would the use of additional items allow for a better overall measure of socio-emotional factors, but it would also allow better analyses to be conducted using each factor alone.

Conclusion

Our study adds to the literature by suggesting that socio-emotional factors change the relationship between status characteristics and the degree of resistance to influence. In particular, we argued that for those in higher-status, socio-emotional factors would play a major role in moderating P(s), and our results support the existence of this moderation effect.

REFERENCES

Berger, J. (1958). Relations between performance, rewards and action-opportunities in small groups (Doctoral dissertation, Harvard University).

Berger, J., Cohen, B. P., & Zelditch, M. Jr. (1972). Status characteristics and social interaction. *American Sociological Review, 37,* 241–255.

Berger, J., & Webster, M. (2006). Expectations, status, and behavior. Pp. 268-300 in *Contemporary Social Psychological Theories* edited by Peter J. Burke. Stanford, CA: Stanford University Press.

Bianchi, A. J., & Lancianese, D. A. (2007). Accentuate the positive: Positive sentiments and status in task groups. *Social Psychology Quarterly, 70*, 7-26.

Bunderson, J. S. (2003). Recognizing and utilizing expertise in work groups: a status characteristics perspective. *Administrative Science Quarterly, 48*, 557-591.

Carli, L. L. (1990). Gender, language and influence. *Journal of Personality and Social Psychology, 59*, 941–951.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences, 3rd edition*. Mahwah, NJ: Erlbaum.

Cook, K., Cronkite, R., & Wagner, D. (1974). *Laboratory for social research manual for experimenters in expectation states theory*. Stanford, CA: Stanford University Laboratory for Social Research.

Kalkhoff, W., & Thye, S. R. (2006). Expectation states theory and research: New observations from meta-analysis. *Sociological Methods & Research, 35*, 219–249.

Lockheed, M. E., & Hall, K. P. (1976). Conceptualizing sex as a status characteristic: Applications to leadership training strategies. *Journal of Social Issues, 32,* 111-124.

Lovaglia, M. J., & Houser, J. A. (1996). Emotional reactions and status in groups. *American Sociological Review, 61*, 867-883.

Lucas, J. W., & Lovaglia, M. J. (1998). Leadership status, gender, group size, and emotion in face-to-face groups. *Sociological Perspectives, 41*, 617-637.

Rashotte, L. S. (2007). Developing your experiment. Pp. 225-242 in *Laboratory Experiments in the Social Sciences* edited by M. Webster and J. Sell. Burlington, MA: Elsevier.

Ridgeway, C. L. (2001). Gender, status, and leadership. *Journal of Social Issues, 57*, 637–655.

Ridgeway, C. L. (2011). *Framed by gender: How gender inequality persists in the modern world.* New York, NY: Oxford University Press.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57,* 743-762.

Troyer, L. (2001). Effects of protocol differences on the study of status and social influence. *Current Research in Social Psychology, 16,* 182-204.

ENDNOTES

[1] For a thorough description of the standard experimental setting used by expectation states researchers, see Cook, Cronkite, and Wagner (1974) or Troyer (2001).

AUTHOR BIOGRAPHY

Shahar Gur is a PhD student in Organizational Science at UNC Charlotte. She holds a bachelor's degree in Psychology from UNC Chapel Hill. Her research focuses on group interactions and prosocial behaviors. Email: sgur@uncc.edu.

Chelsea Beveridge is a doctoral student in the Organizational Science program at UNC Charlotte. She earned bachelor's degrees in Psychology and English at Elon University. Her research involves organizational socialization and internships. Email: cbeveri2@uncc.edu.

Lisa Slattery Walker (formerly known as Rashotte) received her PhD in Sociology from the University of Arizona in 1998. She joined the UNC Charlotte faculty in 1998 and was promoted to Professor of Sociology in 2010. Her research focuses on small group interaction, nonverbal behaviors, identity, emotions, gender, and expectations. Email: Lisa.Walker@uncc.edu.