

Leader Group Prototypicality and Job Satisfaction: The Moderating Role of Job Stress and Team Identification

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The authors examined the relationship between leader group prototypicality (the extent to which a leader is representative of the collective identity) and job satisfaction as an indicator of leadership effectiveness. Leader group prototypicality was expected to interact with job stress and team identification, such that leader group prototypicality is more strongly related to job satisfaction for followers with higher job stress and team identification. Two cross-sectional surveys ($N = 329$ and $N = 89$) conducted with the employees of 4 Italian organizations provided support for this hypothesis. The authors discuss how these findings extend our understanding of leadership effectiveness within the social identity model of leadership.

Keywords: Social Identity Model of Organizational Leadership, leader group prototypicality, uncertainty reduction need, job stress, job satisfaction, leadership effectiveness

Leadership effectiveness essentially lies in leaders' influence on followers (Chemers, 2001; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004; Yukl, 2001). Arguably, however, while leaders may coerce people into compliance, the essence of effective leadership would seem to lie in leadership that is associated with follower well-being and satisfaction (cf. van Knippenberg & van Knippenberg, 2003; Yukl, 2001). Accordingly, a key question for leadership research pertains to leadership's relationship with follower satisfaction. In the present study, we address this issue from the perspective of the social identity analysis of leadership—a perspective that is rapidly gaining in influence in leadership research (Haslam & Platow, 2001; Hogg, 2001; Hogg & van Knippenberg, 2003; Reicher & Hopkins, 2003; van Knippenberg & Hogg, 2003a, 2003b; van

Knippenberg, van Knippenberg, & Bobbio, in press; van Knippenberg et al., 2004).

Social identity analyses of leadership outline how leader group prototypicality—the extent to which a leader is representative of the group or organizational identity—is an important factor in leadership effectiveness (Hogg, 2001). Previous analyses have yielded robust evidence for the proposition that leader group prototypicality is more strongly related to leadership effectiveness to the extent that people identify with the group (team, organization) and to the extent that followers' concerns with, the degree to which the leader is committed to the group is not addressed by overt act of leader's group-orientedness (Hogg & van Knippenberg, 2003; van Knippenberg & Hogg, 2003a). More recently, Pierro, Cicero, Bonaiuto, van Knippenberg, and Kruglanski (2005) extended this perspective by arguing that group members' desire to reach closure and reduce uncertainty, measured through individual difference in need for closure (Kruglanski & Webster, 1996), also moderates the relationship between leader group prototypicality and follower responses to leadership, including job satisfaction. To extend previous research and consider aspects strongly interesting for conceptual and empirical knowledge on organizational and work phenomena, the present study looks at job stress as a factor related to the subjective perception of uncertainty

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and to the desire to reduce it. We argue that, like individual differences in need for closure, job stress moderates the extent to which group members' satisfaction is contingent on leader group prototypicality. As a not unimportant aside, job stress itself is also heavily implicated in analyses of job satisfaction (e.g., Flanagan & Flanagan, 2002; Yousef, 2002; Parasuraman & Alutto, 1984), and especially under stressful conditions where job satisfaction may typically suffer it would seem important to identify aspects of leadership that would be associated with employees' satisfaction. Moreover, we extended previous analysis with a test of the hypothesis that job stress only lead people to rely on leader group prototypicality to the extent that people identify with the collective, according to Social Identity Model of Leadership central tenets (SIMOL; for recent review, see Hogg & van Knippenberg, 2003; van Knippenberg & Hogg, 2003a).

A Social Identity Analysis of Leadership Effectiveness

The social identity approach to group processes and intergroup relations outlines how people define themselves not only in terms of individualizing attributes and interpersonal relationships, but also in terms of collective attributes of a group they belong to (i.e., social identity or collective self; Hogg & Abrams, 1988; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). The more people identify with a group (i.e., define the self in terms of the group identity), the more beliefs, attitudes, and behavior are governed by the group membership. Self-conception in terms of group membership involves the concept of group prototypes, sets of attributes that in a particular context capture the essence of the group (Rosch, 1978). The shared social identity is represented by group prototypes, and group prototypes form an important reference point in salient social groups with which people identify (Hogg, 2001; Turner et al., 1987): group prototypical characteristics form an important source of information about social reality, and group members tend to conform to group prototypes in attitudes and behavior.

These notions about self-definition in collective terms and group prototypes form the starting point of the social identity analysis of leadership. In contrast and complementary to other analyses of

leadership effectiveness, the social identity analysis of leadership emphasizes the fact that leadership processes are enacted in the context of a shared group membership. Accordingly, leaders' characteristics as a group member and especially leader group prototypicality play a key role in leadership effectiveness (Hogg, 2001). Group prototypical leaders exemplify group normative behavior and reflect what members of the group have in common and what sets them apart from other groups. Accordingly, group members are more open to the influence of group prototypical leaders (cf. van Knippenberg, Lossie, & Wilke, 1994), and group prototypical leaders are trusted more to have the group's best interest at heart (Giessner, Sleebos, & van Knippenberg, 2003; van Knippenberg & van Knippenberg, 2005). The social identity analysis of leadership also suggests that because the influence of group prototypicality is contingent on group member self-definition in terms of the group membership, leader group prototypicality is more strongly related to leadership effectiveness the more followers identify with the group or organization (Hogg, 2001). The proposed greater effectiveness of prototypical as compared with less prototypical leaders as well as the moderating role of follower identification with the group or organizations is supported by a range of experimental and field studies (for reviews, see Hogg & van Knippenberg, 2003; van Knippenberg & Hogg, 2003a; van Knippenberg et al., 2004).

Uncertainty, Job Stress, and Leader Group Prototypicality

More recently, Pierro et al. (2005) extended the social identity analysis of leadership by arguing that the need for closure and the associated desire to reduce uncertainty (Kruglanski & Webster, 1996) also moderates the extent to which group members are affected by leader group prototypicality. Hogg (2000) proposed that a desire to reduce uncertainty leads people to turn to their group memberships because the shared social reality provided by group memberships (i.e., as reflected in group prototypes) may reduce uncertainty. Accordingly, a desire to reduce uncertainty may render group members more susceptible to the group prototypicality of the leader (cf. van Knippenberg, van Knippenberg, & van Dijk, 2000). This is exactly what Pierro et al. (2005) found. Leadership ef-

fectiveness (as indicated among other by follower job satisfaction) was more strongly related to leader group prototypicality for team members' with a higher dispositional need for closure (Webster & Kruglanski, 1994).

Although Pierro et al.'s (2005) findings arguably are an important first step in establishing that follower need for closure moderates the relationship between leader group prototypicality and follower satisfaction, the evidence is limited to a single individual difference factor asking for new confirmation and additional research. Obviously, other factors may induce individuals' need for closure and a desire to reduce uncertainty, too, (e.g., Kruglanski & Webster, 1991; for review, see Kruglanski, 2004) and may be seen as individual reactions and outcomes.

Therefore, to extend Pierro et al.'s (2005) analysis and to provide a deeper knowledge on work central variables and on processes occurring on organizational life, we propose to test the prediction that job stress, as an individual outcome that feed into the need for closure and the desire to reduce uncertainty, would likewise lead group members to rely more on leader group prototypicality. Then, the present study proposes job stress as a further variable which may moderate the relationship between leader group prototypicality and follower job satisfaction.

Job stress is defined, in effect, as an aversive or unpleasant emotional and physiological state linked to adverse work experiences, especially uncertain experiences and outside the employees' control (Beehr & Bhagat, 1985; Hart & Cooper, 2001). More specifically, it is widely known that stress effects may occur only if the situation is appraised as threatening or otherwise demanding and insufficient resources are available to cope with the situation (Cohen, Kamarck, & Mermelstein, 1983), assuming that stressful response is dependent on personal and contextual factors as well. Then, job stress is seen as an individual outcome of personal, interpersonal, contextual, and role-related factors (Hart & Cooper, 2001; Kahn & Byosiore, 1992), according to a person-situation interaction perspective (for a complete conceptual frame on this perspective, see Snyder & Ickes, 1985). Previous research usually assessed this variable through the measure of individuals' perceived stress (e.g., Cohen et al., 1983), stressful aspects of job defined *stressors*, and

the reputed results of stressor exposure called *strains* (see Spector & Jex, 1998). In the present contribution we used Cohen and colleagues' (1983) measure of perceive stress (Study 1) and Spector and Jex's (1998) Physical Symptoms Inventory (PSI; Study 2).

Furthermore, job stress may lead people to seek clear and rapid closure to avoid uncertainty; accordingly, stress is related to a reduction in cognitive performance manifested in phenomena such as premature reaction and closure, and increased use of stereotyped judgments (e.g., Eysenck, 1982; Jamieson, & Zanna, 1989). Indeed, according to Kruglanski and Webster (1996), stress leads to an increase in cognitive structuring defined by Neuberg and Newsom (1993) as the creation and use of abstract mental representations (i.e., schema prototypes, attitudes, and stereotypes). Therefore, there are many supports to our suggestion of job stress as an uncertainty-related factor that may lead people to seek and use group prototypes as social reality provider and as a means to reduce uncertainty and reach closure. Thus, we propose that job stress may render group members more sensitive to leader group prototypicality such that leader group prototypicality is more strongly related to follower satisfaction the more stress the follower experiences. However, because group prototypes will only perform this uncertainty-reduction function to the extent that people identify with the group (Hogg, 2001), we expected followers' social identification to moderate the interaction between leader group prototypicality and job stress. Then, it is possible to suppose that both the extent to which people are identified with the work team (i.e., group identification with the salient social group) and the level of their stress would play a role in affecting the relationship between leader group prototypicality and their job satisfaction. In other words, the more people would identify with the team and the more they felt stress, the more a high prototypical leader may help them to escape uncertainty feelings and to be satisfied. To summarize, the aim of this contribution is to extend previous analysis on the relationship between uncertainty and SIMOL hypothesising a 3-way interaction of followers' group identification, leader group prototypicality, and followers' job stress in predicting their job satisfaction. Two surveys (Study 1 and 2) were conducted to test this hypothesis within different Italian working setting

and, more importantly, by adopting different measures and instruments.

Study 1

In Study 1 the existence of a three-way interaction between job stress, team identification, and leader group prototypicality in predicting the level of job satisfaction was hypothesized.

Method

Participants

In total 329 employees (164 men and 165 women) drawn from three Italian organizations were surveyed (100 employees of a call center, 132 of a hospital nurses, and 97 military officer). Their mean age was 35.26 ($SD = 9.14$).

Measures

Study variables were assessed in a questionnaire that was administered individually to the participants with the support of the human resource manager. The instruction of the questionnaire asked to refer always to the work team/unit and to the leader of the same unit. The questionnaire included the following measures.

Leader group prototypicality. Assessed with the following four items derived from Platow and van Knippenberg (2001) and van Knippenberg and van Knippenberg (2005): "This team leader is a good example of the kind of people that are member of my team"; "This team leader has very much in common with the members of my team"; "This team leader represents what is characteristic about the team"; and "This team leader is very similar to the members of my team." Responses were recorded on 6-point scales from 1 (*strongly disagree*) to 6 (*strongly agree*). A composite leader group prototypicality score was computed by summing across responses to each item ($\alpha = .93$).

Team identification. Assessed with the following five items derived from Mael and Ashfort (1992; van Knippenberg & van Schie, 2000): "When someone criticizes my work team, It feels like a personal insult"; "I'm very interested in what others think about my work team"; "When I talk about my work team, I usually say "we" rather than "they"; "My work team successes are my successes"; and "When

someone praises my work team, it feels like a personal compliment." Responses were recorded on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A composite team identification score was computed by summing across responses to each item. Reliability of the team identification measure was excellent ($\alpha = .89$).

Job stress. Job stress was assessed with the following six items derived from the Perceived Stress Scale (Cohen et al., 1983) measuring stress experienced in the month before: "In the last month, I often felt nervous and stressed"; "In the last month, I often felt unable to control the important things in my life"; "In the last month, I often was angered because of things that happened that were outside of my control"; "In the last month, I often found that I could not cope with all the things that I had to do"; "In the last month, I often found difficulties piling up so high that I could not overcome them"; and "In the last month, I often felt upset because of something that happened unexpectedly." Responses were recorded on 6-point scales, 1 (*strongly disagree*) to 6 (*strongly agree*). A composite perceived stress score was computed by summing across responses to each item. Reliability of the stress measure was excellent ($\alpha = .87$).

Job satisfaction. Job satisfaction was measured with the following four items derived from Brayfield and Rothe (1951): "Most days I am enthusiastic about my work"; "I feel fairly satisfied with my present job"; "Each day at work seems like it will never end" (reverse scored); and "I find real enjoyment in my work." We preferred to measure individuals' satisfaction with the job as a whole and as an evaluative judgment (Warr, Cook, & Wall, 1979) rather than consider all the single and extrinsic aspects of job (e.g., Job Description Index by Smith, Kendall, & Hulin, 1969; or Job Satisfaction Survey—JSS by Spector, 1985) that, though valid and complete measures, conceptually may partly overlap the other assessed aspects (e.g., strain and stress). Responses were recorded on 6-point scales ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A composite job satisfaction score was computed by summing across responses to each item. Reliability of the job satisfaction measure was very good ($\alpha = .82$).

Results

A summary of descriptive statistics and correlations between all variables is presented in Table 1. As can be seen job satisfaction is positively related to leader group prototypicality and team identification, and negatively related to job stress. Also, job stress is negatively related to leader group prototypicality and team identification, thus confirming the role of social identification and self-categorization processes in affecting followers' response to uncertainty and stressful situations (Haslam, 2004). Indeed, the relationship between team identification and stress is consistent with Haslam and colleagues' (Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005) findings, showing that the extent that people are identified with a relevant social group (including the workgroup) is negatively related to their level of stress.

The predictions regarding the effect on job satisfaction of interaction between team perceived leader group prototypicality, identification, and stress were tested by means of a moderated regression analysis. In this analysis the main effects of leader group prototypicality, team identification, and stress, and all possible 2-way interactions and the 3-way interactions were entered. Also the main effect of organization, gender, and age, as control variables, were entered. Results of this analysis are reported in Table 2.

As can be seen, results show: (a) a negative main effect of stress ($\beta = -.38, p < .001$), with more stress associated with less job satisfaction, aligned with results of previous research (see,

Table 2

Job Satisfaction as a Function of Leader Group Prototypicality, Team Identification, and Stress: Results of Moderated Multiple Regression Analysis

Criteria predictors	Job satisfaction
	β
Stress	-.38***
Leader group prototypicality (LGP)	.25***
Team identification (TI)	.44***
Stress \times LGP	.10*
Stress \times TI	.05
LGP \times TI	.11*
Stress \times LGP \times TI	.22***
Control variables	
Organization (1 vs. 2, 3)	.03
Organization (2 vs. 1, 3)	.19***
Age	.03
Gender	-.06

* $p < .05$. *** $p < .001$.

e.g., Flanagan & Flanagan, 2002; Yousef, 2002; Parasuraman & Alutto, 1984); (b) a positive main effect of leader group prototypicality ($\beta = .25, p < .001$), with higher prototypicality associated with more job satisfaction, thus confirming Pierro et al.'s (2005) results; (c) a positive main effect of team identification ($\beta = .44, p < .001$), with higher identification associated with more job satisfaction, aligned with Haslam et al.'s (2005) results; (d) a positive 2-way interaction effect of stress \times prototypicality ($\beta = .10, p < .05$), suggesting that high stress is associated with a stronger relationship between leader prototypicality and job satisfac-

Table 1

Descriptive and Correlations Between Variables (Study 1; N = 329)

	M	SD	1	2	3	4	5	6	7	8
1. Leader group prototypicality	4.00	1.34	(.93)							
2. Team identification (TI)	4.61	1.14	.37***	(.89)						
3. Job stress	2.58	1.14	-.25***	-.29***	(.87)					
4. Job satisfaction	4.38	1.15	.44***	.54***	-.47***	(.82)				
5. Organization (1 vs. 2, 3)	—	—	-.04	.19**	-.27***	.02	—			
6. Organization (2 vs. 1, 3)	—	—	-.03	.15**	.18**	.16**	-.53***	—		
7. Age	35.26	9.14	-.04	.14*	-.05	-.03	.47***	-.09	—	
8. Gender	—	—	-.01	-.06	.19***	.05	-.60***	.48***	-.33***	—

Note. Cronbach's alpha in parentheses.

* $p < .05$. ** $p < .01$. *** $p < .001$.

tion; (e) a positive 2-way interaction effect of prototypicality \times team identification ($\beta = .11$, $p < .05$), suggesting that the relations between leader group prototypicality and job satisfaction was stronger for those subjects presenting higher team identification.

Of greatest importance, the 3-way interaction was significant ($\beta = .22$, $p < .001$). The positive sign of the 3-way interaction suggest that, as predicted, the relation between leader group prototypicality and job satisfaction was stronger for followers with higher stress combined with higher team identification.

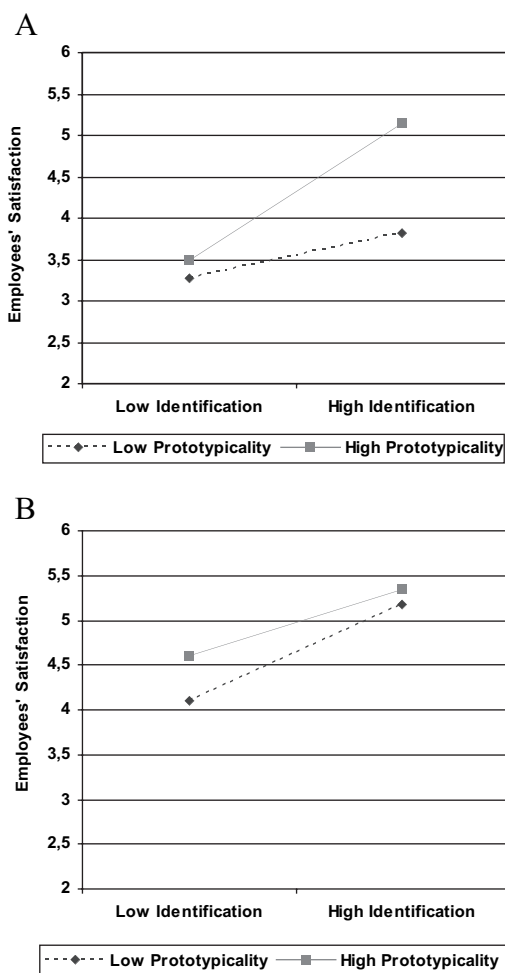


Figure 1. A: Employees' job satisfaction in high stress employees as a function of group identification and leader group prototypicality (Study 1). B: Employees' job satisfaction in low stress employees as a function of group identification and leader group prototypicality (Study 1).

These findings are illustrated via the predicted mean values shown in Figure 1, A and B. Following the suggestion of Aiken and West (1991), these were values one standard deviation above and below the means of the relevant variables in the regression equation. The simple interaction analysis conducted to further understand the nature of the 3-way interaction (Aiken & West, 1991) revealed that the relationship between identification and prototypicality in predicting job satisfaction was significant when stress was relatively high (1 *SD* above the mean: $\beta = .31$; $p < .001$) whereas was not significant when stress was relatively low (1 *SD* below the mean: $\beta = -.04$; *ns*). Moreover the simple slope analysis conducted to analyze the 2-way interaction (leader group prototypicality \times team identification) only for those participants relatively high in stress score (1 *SD* above the mean) revealed that the relationship between prototypicality and job satisfaction was significant for participants relatively high in identification (1 *SD* above the mean: $\beta = .56$; $p < .001$) whereas this relationship was not significant for participants relatively low in identification (1 *SD* below the mean: $\beta = .13$; $p = .22$).

Such results indicated that for those individuals that experienced more stress and that are more strongly identified with the team, the leader group prototypicality would be more strongly related to their job satisfaction. The correlational nature of these data asks for new confirmation to attest this kind of relationship between the variables.

Study 2

The second study tested the same hypothesis of Study 1: the existence of a 3-way interaction effect between job stress, team identification, and leader group prototypicality in predicting the level of job satisfaction. This prediction was tested on a new sample of employees and using a different measure for the job stress. This in order to enhance the validity of the results obtained in Study 1.

Method

Participants

In total 89 employees (43 men and 46 women) drawn from a small Italian consumer

electronics company was surveyed. Their mean age was 38.65 ($SD = 8.58$).

Measures

The variables were assessed in a questionnaire that was administered individually to the participants and, similarly to Study 1, with the support of the Human Resource Unit. The instruction of the questionnaire asked to refer always to the work team/unit and to the leader of the same unit. The questionnaire included the following measures.

Leader group prototypicality. Assessed with the same four items used in Study 1. Responses were recorded on 6-point scales from 1 (*strongly disagree*) to 6 (*strongly agree*). A composite leader group prototypicality score was computed by summing across responses to each item. Reliability of the scale was excellent ($\alpha = .89$).

Team identification. Assessed with the same five items scale used in Study 1. Responses were recorded on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A composite team identification score was computed by summing across responses to each item. Reliability of the team identification measure was good ($\alpha = .73$).

Job stress. Job stress was assessed differently from Study 1 with the Italian translation of the Physical Synthoms Inventory (PSI; Spector & Jex, 1998), a strain scale composed by 18 items adapted to assess physical, somatic health symptoms stress. Respondents were asked to indicate for each symptom if they experienced it in the month before (e.g., "upset stomach or nausea," "trouble sleeping," "headache," "loss of appetite," etc.). Responses were recorded on 5-point scales from 1 (*never*) to 5 (*very often*). A composite stress symptoms score was computed by summing across responses to each item. Reliability of the stress measure was excellent ($\alpha = .87$).

Job satisfaction. Job satisfaction was measured with the same four items used in Study 1 and derived from Brayfield and Rothe (1951). Responses were recorded on 6-point scales from 1 (*strongly disagree*) to 6 (*strongly agree*). A composite job satisfaction score was computed by summing across responses to each

item. Reliability of the job satisfaction measure was acceptable ($\alpha = .68$).¹

Results

A summary of descriptive statistics and correlations between all variables is presented in Table 3. Job satisfaction is positively related to leader group prototypicality and team identification and negatively related to stress symptoms. Also, symptoms are negatively (but not significantly) related to leader group prototypicality and team identification, confirming again the role of social identification and self-categorization processes in affecting followers' response to uncertainty and stressful situations (Haslam, 2004; Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005).

As in Study 1 the prediction regarding the effect on job satisfaction of interaction between team perceived leader group prototypicality, identification, and stress symptoms was tested by means of a moderated regression analysis which included gender and age as control variables. Results of this analysis are reported in Table 4.

As can be seen, results show: (a) a negative main effect of stress symptoms ($\beta = -.30, p <$

¹ The Cronbach's alpha coefficients of the team identification and job satisfaction scales used in the two studies seem to decrease from Study 1 to Study 2, inducing to think that they are in someway different (although they are both acceptable with values close to .70; cf. Nunnally & Bernstein, 1994). Evidently, as a reader might suggest, it may be useful to understand if these differences are significant. In general, in fact, the differences between reliability of the same measure across independent sample may be explained through the accuracy of coefficient alpha measurement (Duhachek & Iacobucci, 2004) and might be analyzed. These authors, accordingly, defined a useful method to assess the effect of the measurement error, and consequently, the accuracy of alpha computation of two independent samples (Duhachek & Iacobucci, 2004). Through this test we found that the difference between alpha coefficients of team identification scales of the two samples is equal to .16 and a 95% confidence interval that ranges from $-.29$ and $.62$, and the difference between alphas of job satisfaction scales of the two samples is equal to .11 and a 95% confidence interval that ranges from $-.39$ and $.63$. These results attest that the effect of measurement error for the two scales is equal across the two samples as the zero was included in the multisample confidence interval (cf. Duhachek & Iacobucci, 2004, p. 803). Therefore, this test allows us to be confident about the accuracy of alpha coefficients of the measure of team identification and job satisfaction used across the two samples and to conclude that these differences may be explained by the chance (for instance random fluctuation, etc.).

.01), with more stress symptoms associated with less job satisfaction, aligned with results of Study 1 and previous research (see, e.g., Flanagan & Flanagan, 2002; Yousef, 2002; Parasuraman & Alutto, 1984); (b) a positive main effect of Leader Group Prototypicality ($\beta = .44, p < .001$), with higher prototypicality associated with more job satisfaction, thus confirming Pierro et al.'s (2005) results. Of greatest importance for our main hypothesis, the 3-way interaction was significant ($\beta = .30, p < .05$). The positive sign of the three-way interaction suggest that, as predicted, the relation between leader group prototypicality and job satisfaction was stronger for followers with higher stress combined with higher team identification.

These findings are illustrated via the predicted mean values shown in Figure 2, A and B computed following the suggestion of Aiken and West (1991) as in Study 1. The simple interaction analysis revealed that the relationship between team identification and prototypicality in predicting job satisfaction was significant when stress symptoms were relatively high (1 *SD* above the mean: $\beta = .33; p < .05$) whereas was not significant when stress symptoms were relatively low (1 *SD* below the mean: $\beta = -.09; ns$). Moreover, the simple slope analysis conducted to analyze the 2-way interaction (leader group prototypicality \times team identification) only for those participants relatively high in stress symptoms (1 *SD* above the mean) revealed that the relationship between prototypicality and job satisfaction was significant for participants who identified relatively high with their team (1 *SD* above the mean: $\beta = .71; p < .01$), whereas this relationship was not significant for participants who identified relatively low with their team (1 *SD* below the mean: $\beta = .18; ns$).

Table 4
Job Satisfaction as a Function of Leader Group Prototypicality, Team Identification and Stress: Results of Moderated Multiple Regression Analysis (Study 2)

Criteria predictors	Job satisfaction
	β
Job stress (symptoms)	-.30**
Leader group prototypicality (LGP)	.44***
Team identification (TI)	.13
Stress \times LGP	-.02
Stress \times TI	.12
LGP \times TI	.12
Stress \times LGP \times TI	.30*
Control variables	
Age	.03
Gender	-.10

* $p < .05$. ** $p < .01$. *** $p < .001$.

Again, these results indicated that for those individuals which experienced more stress symptoms and more strongly identified with the team, the leader group prototypicality would be more strongly related to their job satisfaction. These results provide confirmation for Study 1 results, thus verifying the 3-way interactive effect between the considered variables within a new context.

Discussion

Previous research by Pierro et al. (2005) identified the need for closure and the associated desire to reduce uncertainty as a moderator of the extent to which group member responses to leadership are influenced by leader group prototypicality. The evidence in support of this proposition provided by Pierro et al.'s only concerned dispositional differences in need for clo-

Table 3
Descriptive and Correlations Between Variables (Study 2; N = 89)

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Leader group protototipality	4.06	1.25	(.89)				
2. Team identification (TI)	4.90	0.81	.36***	(.73)			
3. Job stress (symptoms)	1.91	0.62	-.03	-.11	(.86)		
4. Job satisfaction	4.23	0.87	.45***	.25*	-.20****	(.68)	
5. Age	38.65	8.58	-.07	.11	.04	.08	—
6. Gender	—	—	.06	-.08	.04	-.07	-.26*

Note. Cronbach's alpha in parentheses.
* $p < .05$. *** $p < .001$. **** $p = .06$.

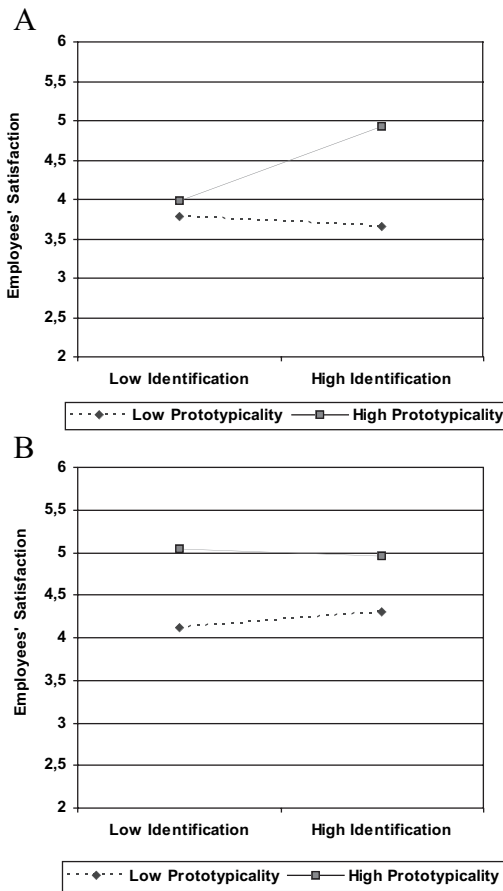


Figure 2. A: Employees' job satisfaction in high stress employees as a function of group identification and leader group prototypicality (Study 2). B: Employees' job satisfaction in low stress employees as a function of group identification and leader group prototypicality (Study 2).

sure, however, and the present study extends this earlier work by identifying job stress—an individual outcome related to uncertainty feeling and the desire to reduce it—as moderator of the impact of leader group prototypicality. Moreover, it also extends previous findings by showing that job stress mainly leads individuals to rely on leader group prototypicality to the extent that they identify with the group. Interestingly and importantly, the present study was able to establish these relationships for follower job satisfaction—a variable that is typically threatened under stress (indeed, the present study also found an overall negative association between stress and satisfaction).

Identifying job stress as a moderator of the influence of leader group prototypicality is relevant because it also points at a host of other factors that may feed into follower uncertainty and need for closure. Organizational change and crisis is for instance typically associated with uncertainty (van Knippenberg & Hogg, 2003a; van Knippenberg et al., in press), and the present findings would suggest that leader group prototypicality would become more important under such circumstances when it comes to informing follower responses to leadership. The present findings would suggest that the social identity analysis of leadership might be particularly suitable to tackle one of the main challenges of leadership research and practice—leadership of change (cf. Yukl, 2001).

We admit that this research includes some limitations. The first one to note is that data derived from a cross-sectional survey and may be subject to common method/source biases. However, while common method/source bias may inflate relationships between variables, it actually leads to an underestimation of interaction effects (Evans, 1985; McClelland & Judd, 1993). Common method bias therefore cannot account for the interactions that are central to the current study. Also, some researchers have shown that common method bias is not strong enough to invalidate the findings (Doty & Glick, 1998). Also, causality relation cannot be inferred as the cross-sectional nature of the data, although it is one of the more used method in applied and field psychological research (especially in organizations, cf. Spector, 1994), then future investigations should adopt experimental or longitudinal design. A third one is represented by the fact that the criteria variables have been assessed by paper and pencil self-report measures; however, in our opinion, some of the analyzed variables (e.g., work-group identification, job satisfaction, etc.) pertain strongly to individuals' perceptions and feelings, and then only hardly would be possible to assess them through actual behaviors and more objective measures. New studies might try to include measures of actual behavior in addition to the more attitudinal variable that was central to the current study. Anyway, from a methodological perspective, it should be noted that the fact that the hypothesis is confirmed across both studies with different measure of employees' job stress,

with different samples, and within different organizations enhance the validity of the results.

In conclusion given the relevance of stress and uncertainty to behavior in organizations, it would seem of clear theoretical and practical importance to pursue this line of research further.

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