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Need for Structure Predicts Leadership Preference

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Prototypicality is an important factor for judgments and evaluations of group members and leadership selection. We tested whether these prototypicality perceptions vary as a function of individual differences in cognitive processing preferences. Participants' need for a structured, stable environment was measured before we independently manipulated the group prototypicality of a leadership candidate. Results revealed that participants' preference for prototypical leaders, and dislike for nonprototypical leaders, was accentuated for those who preferred structured, stable environments. Participants tolerant of less cognitive structure did not show this bias for prototypical leaders and against nonprototypical leaders. These findings suggest that individual differences in cognitive processing tendencies may moderate how group prototypicality is perceived and used, and can consequently affect the type of leaders people prefer.

Keywords: need for structure, leadership, prototypicality

It is well established that group prototypicality affects evaluations and expectancies (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Moreover, group prototypicality has found to be important for leadership evaluation and success, and can inspire leadership trust and support—even in times of failure (e.g., Hogg & van Knippenberg, 2003; Giessner & van Knippenberg, 2008; B. van Knippenberg & van Knippenberg, 2005).

Research so far has tended to assume certain stability in prototypicality perceptions. However, individuals' epistemic motives have found to affect the way in which social information is organized and processed in other domains (e.g., Neuberg & Newsom, 1993; Thompson, Naccarato, Moskowitz, & Parker, 2001; Thompson, Naccarato, & Parker, 1989).

We propose that prototypicality perceptions are themselves variable for individuals and that this variability has tangible consequences for the evaluation, and consequently the selection, of leaders. In particular, we aimed to uncover some cognitive dynamics of prototypicality perceptions.

Personal Need for Structure

Research on epistemic motives has shown that individuals differ in various social-cognitive processing tendencies. Personal need for structure (PNS; Thompson et al., 1989, 2001) refers to individual difference in the need to structure one's environment in a more or less complex way. Individuals high in PNS are more likely to organize social and nonsocial information in a simple way by applying scripts, schemata, stereotypes, and prototypes more readily (Neuberg & Newsom, 1993).

Next to research showing that PNS affects an individual's behaviors, for example, how a task is approached (Schultz & Searleman, 1998) and the time management for tasks (Neuberg & Newsom, 1993), most research has concentrated on exploring how PNS affects cognitive processes, such as mere exposure effects (Han-

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sen & Bartsch, 2001), as well as social-cognitive processes, such as stereotype formation (Clow & Esses, 2005; Hutter, Crisp, Humphreys, Waters, & Moffitt, 2009; Schaller, Boyd, Yohannes, & O'Brien, 1995), trait interferences (Moskowitz, 1993), and the application of stereotypes (Schaller et al., 1995). For example, in a series of studies, Schaller et al. (1995) showed that participants high in PNS were more ready to form and apply stereotypes of groups. Similarly, other studies showed that individuals high in PNS develop less accurate stereotypes, are more confident about the stereotypes formed on only a few group members (Clow & Esses, 2005, Study 1), and are overall more likely to stereotype (Neuberg & Newsom, 1993, Study 4). Overall, this shows that PNS has significant implications for how individuals perceive and process social information.

Prototypicality Perception and Cognitive Processes in Leader Construal

The social identity approach to leadership, which proposes that group prototypical members

can exert more influence and are therefore more likely to emerge and be successful leaders, has also a wealth of empirical support (for reviews, see Hogg & van Knippenberg, 2003; Hogg, van Knippenberg, & Rast, 2012; D. van Knippenberg, 2011). Numerous surveys, experimental studies, and field studies, in various countries and continents, showed that ingroup leaders are preferred over outgroup leaders (Hais, Hogg, & Duck, 1997; Van Vugt & De Cremer, 1999), and that trust, effectiveness, and endorsement (Giessner & van Knippenberg, 2008; Giessner, van Knippenberg, & Sleebos, 2009; Hais et al., 1997; Hogg et al., 2006; Platow & van Knippenberg, 2001; Ullrich, Christ, & van Dick, 2009; B. van Knippenberg & van Knippenberg, 2005) are affected by how closely leaders match the group prototype. Together these findings provide strong support for the notion that there is an evaluative preference for leadership candidates who are prototypical of the group.

Although a prototypicality bias is not problematic for leadership per se (cf. Thoroughgood, Tate, Jacobs, & Sawyer, 2012), in-leader *selection* relying on a heuristic rule of thumb (i.e.,

Table 1
Moderation Hypothesis

Variable	Model	Variables	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>p</i>	<i>r</i> ² / Δ <i>r</i> ²	<i>p</i>
Candidate choice	1	Condition	19.92	4.97	4.00	.000	0.22	.001
		PNS	.347	3.02	0.11	.909		
	2	Condition	-52.16	23.79	-2.27	.033		
		PNS	-9.87	4.34	-2.27	.027		
Leadership trust	1	Interaction	17.62	5.70	3.09	.003	0.33	.003
		Condition	5.78	4.29	1.35	.183		
	2	PNS	-1.09	2.60	-0.42	.675		
		Condition	-59.31	20.32	-2.92	.005		
Feeling thermometer	1	PNS	-10.32	3.71	-2.78	.007	0.19	.002
		Interaction	15.92	4.87	3.27	.002		
	2	Condition	0.42	0.46	0.91	.365		
		PNS	-0.14	0.29	-0.49	.622		
Attitude	1	Condition	-6.02	2.34	-2.57	.013	0.15	.007
		PNS	-1.13	0.45	-2.54	.014		
	2	Interaction	1.58	0.56	2.80	.007		
		Condition	0.67	0.25	2.64	.001		
Perceived representativeness	1	PNS	0.05	0.15	0.30	.761	0.22	.036
		Condition	1.85	1.26	-1.47	.148		
	2	PNS	-0.31	0.23	-1.35	.183		
		Interaction	0.62	0.30	2.04	.046		
Perceived representativeness	1	Condition	1.53	0.29	5.29	.000	0.17	.046
		PNS	-0.001	0.18	-0.03	.973		
	2	Condition	-2.95	1.37	-2.16	.035		
		PNS	-0.64	0.25	-2.57	.013		
		Interaction	1.10	0.33	3.34	.001	.441	.001

Note. PNS = personal need for structure.

simply representativeness of the group), by definition, means ignoring more diagnostic individuating information. In addition, it might not always be in the best interests of the group to appoint a representative leader. To innovate, grow, and strengthen the group leaders must sometimes steer their group into new directions (Abrams, Randsley de Moura, Marques, & Hutchison, 2008; Randsley de Moura, Abrams, Marques, & Hutchinson, 2011). Because the propensity to prefer prototypical over nonprototypical leaders can be partially explained by a reliance on heuristic thinking (Hogg & van Knippenberg, 2003; Koenig, Eagly, Mitchell, & Ristikari, 2011)—that is, the representativeness heuristic (Tversky & Kahnemann, 1982)—understanding whether some individuals are more prone to use this heuristic to make leadership judgments and choices will expand our insight into how this bias for group prototypical leaders can be understood.

This Research

This research aims to explore whether PNS affects social–cognitive processing variables in

regard to the use of stereotypic information to judge and form impressions of group members who are leadership candidates. First, we expect that participants who are high in PNS are more ready to use group prototypicality to draw inferences about the representativeness of a leadership candidate. We hypothesized that individuals who are high in PNS will view a leadership candidate who is prototypical as more representative for their group and, consequently, a leadership candidate who is nonprototypical as less representative for their group.

Research has shown that participants' motivation to interpret a target as more or less complex is affected by individuals PNS (Thompson, Roman, Moskowitz, Chaicken, & Bargh, 1994). We propose that PNS should also affect the perception a leadership candidates' representativeness, based upon the indicated group prototypicality. Because group prototypicality provides the individual with a quick and easy way of assessing the leadership candidate's similarity to other group members, high PNS individuals should be more prone to use this easy, accessible information to make subsequent judgments on group representativeness. We therefore predicted that high PNS individuals

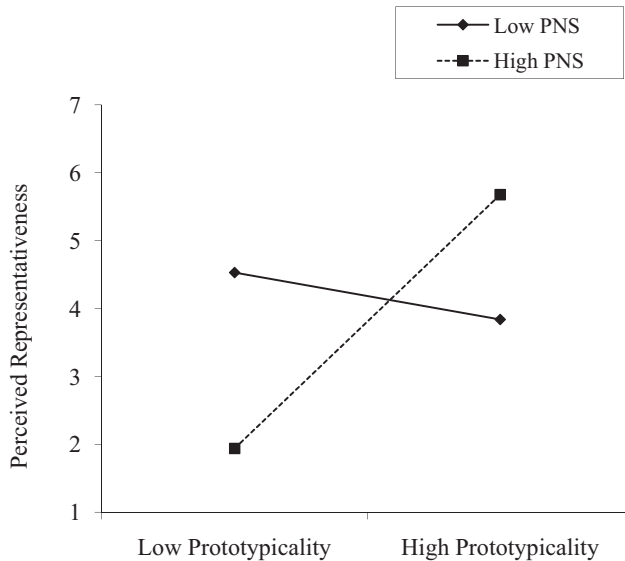


Figure 1. Perceived representativeness as a function of candidate prototypicality and personal need for structure (PNS). Participants differentiated reaction toward a nonprototypical (= Low Prototypicality) and prototypical (= High Prototypicality) candidate. Conditional effects: +1 *SD* PNS midpoint, $M = 4.92$, $b = 2.43$, $t(56) = 6.41$, $p \leq .001$, 95% CI [1.67, 3.20]; -1 *SD* PNS midpoint, $M = 3.25$, $b = 0.61$, $t(56) = 1.60$, $p = .115$, 95% CI [-0.15, 1.38].

will exaggerate group prototypicality or non-prototypicality to have a clear and structured social environment that enables them to draw a conclusion on whether the presented leadership candidate can be viewed as representative for the group or not.

Additionally, we investigated whether PNS differently affects other variables that are associated with being a representative for one's group. Some research regarding individual differences in cognitive processing styles has already shown that they can have discernible impacts on leader perceptions. Felfe and Schyns (2006) demonstrated that PNS was negatively related to a preference for a transformational leadership style. Additionally, the need for cognitive closure, an individual difference variable that measures individuals' tendency to come to a conclusion in order to overcome ambiguity, was found to moderate the relationship between leadership prototypicality and leadership effectiveness, job satisfaction, performance, and turnover intentions (Pierro, Cicero, Bonaiuto, van Knippenberg, & Kruglanski, 2005).

Because prototypicality perceptions in leadership evaluations are a judgment of the degree to which a leader conforms to a group's stereotype, PNS should predict leadership preference contingent upon the leader's perceived conformity to the norm. We therefore expected that the same moderation between individuals PNS score and manipulated prototypicality should predict whether individuals see a prototypical or a nonprototypical target as fit to fulfill a leadership role. Consequently, the same moderation between PNS and prototypicality should affect variables associated with leadership.

As reviewed, perceived ingroup prototypicality is crucial for the success and emergence as a leader (D. van Knippenberg, 2011). We therefore also investigated whether the indicated ingroup prototypicality within our study affects the representativeness perceptions of a leadership candidate, independent of PNS. We expected that perceived representativeness of the leadership candidate should mediate the direct effect of indicated ingroup prototypicality on leadership variables.

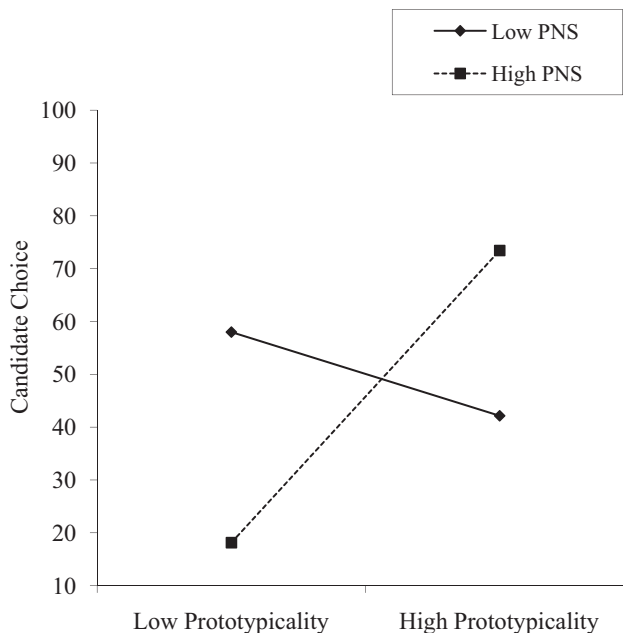


Figure 2. Candidate choice as a function of candidate prototypicality and personal need for structure (PNS). Participants differentiated reaction toward a nonprototypical (= Low Prototypicality) and prototypical (= High Prototypicality) candidate. Conditional effects: +1 *SD* PNS midpoint, $M = 4.92$, $b = 34.49$, $t(56) = 5.21$, $p \leq .001$, 95% CI [21.22, 47.75]; -1 *SD* PNS midpoint, $M = 3.22$, $b = 5.14$, $t(56) = 0.77$, $p = .44$, 95% CI [-8.22, 18.51].

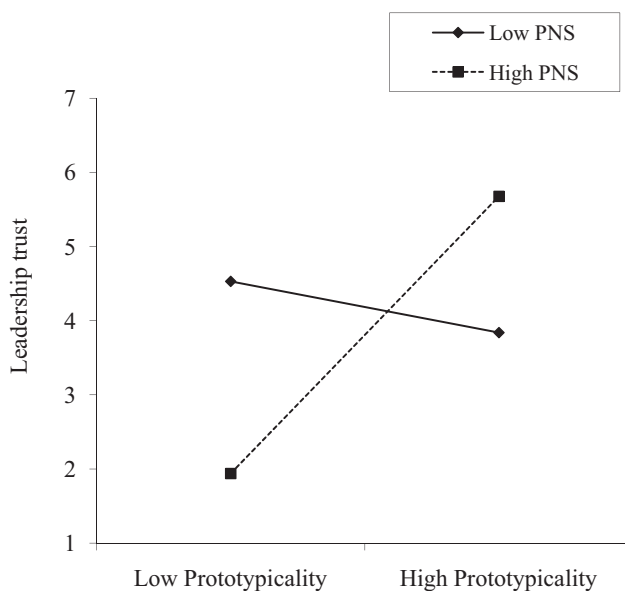


Figure 3. Leadership trust as a function of candidate prototypicality and personal need for structure (PNS). Participants differentiated reaction toward a nonprototypical (= Low Prototypicality) and prototypical (= High Prototypicality) candidate. Conditional effects: +1 *SD* PNS midpoint, $M = 4.92$, $b = 18.94$, $t(56) = 3.35$, $p = .001$, 95% CI [7.61, 30.27]; -1 *SD* PNS midpoint, $M = 3.25$, $b = -7.56$, $t(56) = -1.33$, $p = .19$, 95% CI [-18.98, 3.85].

Finally, we investigated whether the moderation effect that PNS and indicated group prototypicality has on the perceived group representativeness of a leadership candidate mediates variables that show whether the leadership candidate would be supported within a leadership position.

In sum, we hypothesized and tested three hypotheses. In the moderation hypothesis, we proposed that PNS and manipulated group prototypicality should moderate the perceived group representativeness of a leadership candidate, and that the same moderation should affect other variables associated with leadership. In the mediation hypothesis, we predicted that perceived representativeness of a leadership candidate should mediate the direct effect of prototypicality on leadership judgment variables. And finally, in the mediated moderation hypothesis, we predicted that the moderation between group prototypicality and PNS on perceived representativeness mediates the effect on leadership judgment variables.

Method

Participants and Design

Sixty participants were allocated randomly to a condition in which they either evaluated a prototypical or a nonprototypical leadership candidate. PNS was measured prior to this manipulation.¹ The mean age was 26 years; 35 participants were female, and 57 participants were German.

Procedure

This study was conducted at the Friedrich Schiller University (FSU), Jena, Germany, and the data were collected in a group setting at a secluded corner in the auditorium of the university's main building. The university system within Germany changed significantly over the

¹ We included an additional manipulation to investigate further determinants of leader preference. However, this yielded nothing of interest and had no impact whatsoever on the reported results. As such, we do not report it any further.

last decade, due to the requirements of the Bologna Process. New degrees were introduced (BSc, BA, and MSc), and the introduction of tuition fees and new studentships, such as the *Deutschlandstipendium*, are a constant debate within universities, society, and media. Students taking part in this survey were made to believe that, within the upcoming fall semester, there would be a public round-table discussion about the positive and negative effects of these changes and that the round-table discussion would, on the one hand, have three university representatives, including one student, and, on the other hand, three local politicians.

Participants were told that there were 20 applicants for this position and that the survey was to explore which applicant—who was later on indicated to be either prototypical or nonprototypical for FSU students—would be viewed as best to represent the students view within this discussion. Participants were made to believe that all applicants had to undergo a battery of personality questionnaires when applying for the position and that these questionnaires were used in previous studies within the FSU. This was to explain how we were later able to

indicate the prototypicality of the leadership candidate.

In the next step, we told participants that, in order to gain a better impression of the questionnaires applicants had to answer, they would be asked to fill in one of the questionnaires themselves. This questionnaire was a German translation of the 12-item PNS scale, and we were thereby able to assess PNS without interrupting the cover story (Thompson et al., 1989, 2001; $\alpha = .79$). After this, participants were told that they would be randomly introduced to one of the 20 candidates. Participants were informed that they had to assess this applicant on the basis of his or her score on the same questionnaire as the one they just filled in, and that the score of this personality questionnaire is usually mapped on two dimensions (Dimension A and Dimension B). Participants did not receive any additional information in regard to the content of the dimensions. They then received an initial graph, which represented the distribution and the scores of other FSU students. Additionally, this first graph indicated the average of FSU student scores.

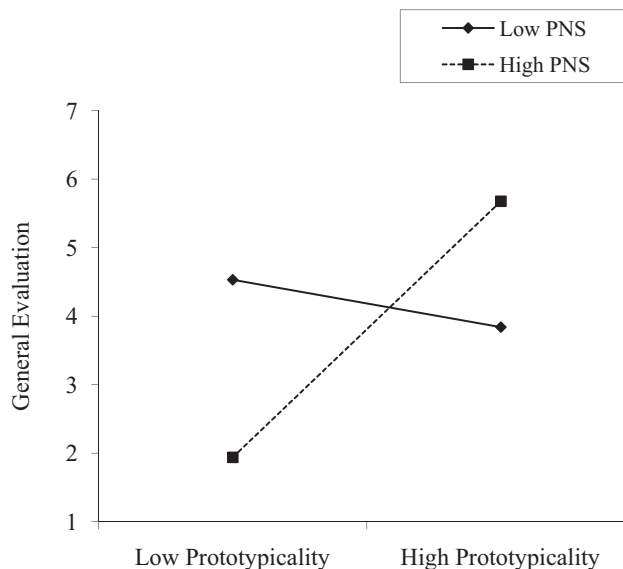


Figure 4. General evaluation as a function of candidate prototypicality and PNS. Participants differentiated reaction toward a nonprototypical (= Low Prototypicality) and prototypical (= High Prototypicality) candidate. Conditional effects: +1 *SD* PNS midpoint, $M = 4.86$, $b = 1.68$, $t(56) = 2.68$, $p = .01$, 95% CI [0.42, 2.94]; -1 *SD* PNS midpoint, $M = 3.22$, $b = 5.14$, $t(56) = -1.37$, $p = .44$, 95% CI [-8.22, 18.5].

Participants then received a second graph, which used this same distribution of FSU scores and indicated the score of the candidate participants were asked to evaluate immediately afterward. Participants either received a prototypical candidate, who was indicated as having the same score as the average FSU student, or a nonprototypical candidate, who was indicated as scoring one standard deviation below the mean on each dimension. Providing participants a comparative frame to indicate group prototypicality or nonprototypicality is a widely used paradigm to manipulate leadership prototypicality and deviance, as it provides the participants with information about the candidate's similarity to other group members (e.g., Abrams et al., 2008). Finally, participants completed the dependent measures before being thanked, debriefed, and dismissed.

Dependent Measures

Perceived representativeness. On a 7-item scale (1 = *strongly disagree*, 7 = *strongly agree*), participants were asked to indicate how representative they regarded the candidate (e.g., "The student is representative of

FSU students."). The scale was adopted from B. van Knippenberg and van Knippenberg (2005) and is recognized as a valid measure of perceived representativeness (D. van Knippenberg, 2011). Higher mean scores indicate higher representativeness ($\alpha = .92$).

Candidate choice. Candidate choice was assessed by asking participants to indicate how likely they would choose the candidate as their representative, placing a cross on a 9-cm-long line (0 = *very unlikely* to 90 = *very likely*).

Leadership trust. This variable was assessed on a 4-item scale (e.g., "I trust the candidate to represent students' views"). Participants placed a cross on a 9-cm-long line with opposite endpoints (0 = *not at all*, 9 = *very much*). We computed an aggregated score with higher numbers indicating more leadership trust, $\alpha = .79$.

A feeling thermometer ranging from 0 to 100 degrees assessed the general warmth felt toward the candidate. Finally, seven semantic differentials, for example, bad-good, foolish-wise, on 9-point scales, assessed participants' attitude toward the candidate (Tormala

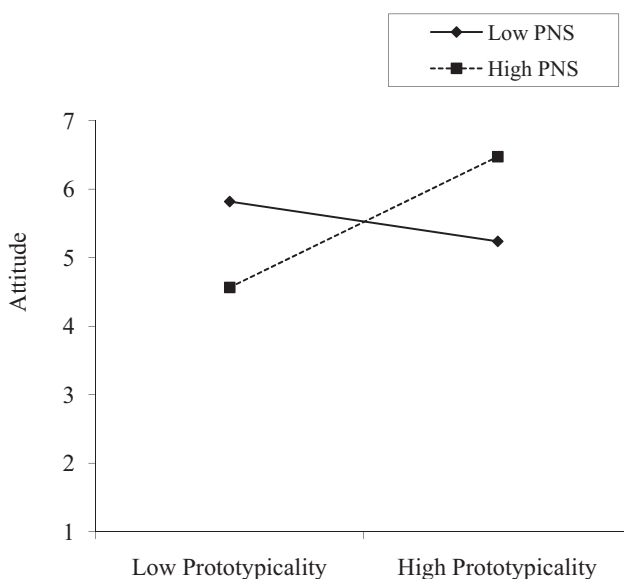


Figure 5. Attitude as a function of candidate prototypicality and PNS. Participants differentiated reaction toward a nonprototypical (= Low Prototypicality) and prototypical (= High Prototypicality) candidate. Conditional effects: +1 *SD* PNS midpoint, $M = 4.92$, $b = 1.78$, $t(56) = 3.36$, $p \leq .001$, 95% CI [0.47, 1.88]; -1 *SD* PNS midpoint, $M = 3.25$, $b = 0.14$, $t(56) = 0.43$, $p = .667$, 95% CI [-0.55, 0.86].

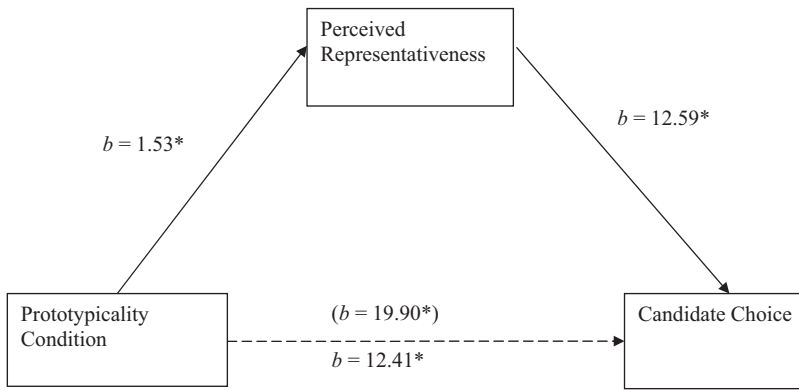


Figure 6. Mediation analysis: candidate choice. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.39$, $p \leq .001$.

& Petty, 2002). Higher numbers indicated more positive attitudes ($\alpha = .86$).

Results

Moderation Hypothesis

We entered a dummy-coded condition variable (0 = *nonprototypical*; 1 = *prototypical*) as focal predictor and PNS as moderator in a first step in a hierarchical regression. In a second step, the interaction term was added with the aggregated perceived representativeness score as dependent variable. The interaction term was significant and increased the amount of explained variance significantly (see Table 1).

To probe the interaction, we plotted the moderator one standard deviation above and below its midpoint, using bootstrapping with a subsample of $n = 5,000$. This analysis showed that there

was a significant conditional effect one standard deviation above the PNS midpoint but not one standard deviation below the PNS midpoint (see Figure 1).

We applied the same analysis for each dependent variable—candidate choice, leadership trust, feelings and attitudes—and the same patterns emerged (see Figures 2, 3, 4, and 5). This shows that participants high in PNS use the indicated group prototypicality to form a judgment in regard to how representative the target is perceived to be for the group of FSU students. Moreover individuals high in PNS make an evaluative distinction based upon the candidate’s group prototypicality, and also base their intention to vote for the candidate and to attribute leadership trust toward the candidate more on the manipulated group prototypicality than individuals low in PNS.

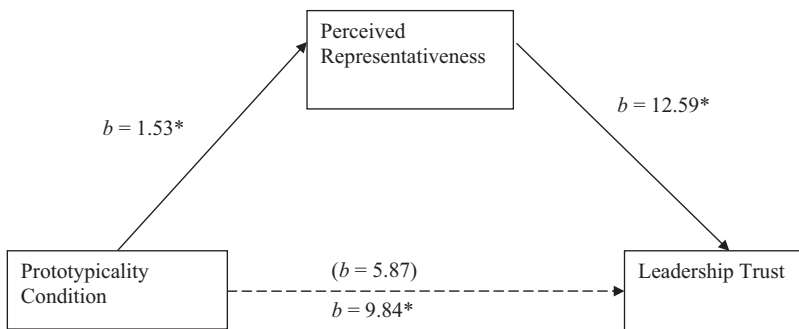


Figure 7. Mediation analysis: leadership trust. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.15$, $p \leq .001$.

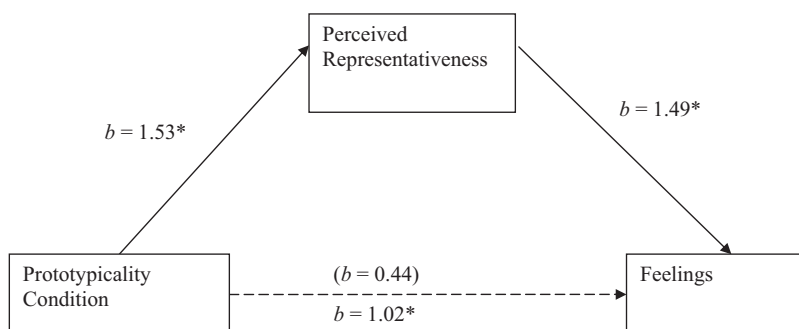


Figure 8. Mediation analysis: feelings. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 3.91$, $p \leq .001$.

Mediation Hypothesis

To explore the proposed mediation of perceived representativeness between the prototypicality conditions on all dependent variables, we first used an indirect path analysis that includes the Sobel z test and bootstrapping, with $n = 5,000$ (Preacher & Hayes, 2004). We found that, for candidate choice, leadership trust, feelings, and attitudes are mediated by perceived representativeness, see Figures 6, 7, 8, and 9.² Because small samples increase the likelihood of violating the normality assumption, we also estimated confidence intervals for each mediation using bootstrapping (Preacher & Hayes, 2004). None of confidence intervals obtained by bootstrapping of $n = 5,000$ subsamples contained a zero and therefore confirmed the results of the Sobel test (see Table 2).

Mediated Moderation Hypothesis

In order to test whether the reported moderation effects were mediated by the perceived representativeness of the candidate, we reentered the interaction term as well as the main effects in a linear regression, but included the perceived representativeness of the candidate as an additional predictor variable. A first indication of a mediated moderation would be if the previously significant moderation effects are decreased, or are even nonsignificant, after entering the mediator perceived representativeness. Entering the fourth predictor variable—perceived representativeness—reduced the direct effect of the prototypicality manipulation, the direct effect of PNS, and the moderation effect between PNS and prototypicality, with

only the perceived representativeness of the candidate as a significant predictor of candidate choice (see Figure 10). We then tested the indirect path using the Sobel z test and indirect path analysis proposed by Preacher and Hayes (2008), using a bootstrapping sample of $n = 5,000$. Both analyses showed a significant indirect effect (see Table 2). We found the same pattern for leadership trust, feelings, and attitudes (see Figures 11, 12, and 13, and Table 2). These results thereby show that the moderation and the mediation effect reported are fully mediated by the perceived representativeness of the candidate.

Discussion

In this research, we found that PNS has a differentiated impact on the way in which prototypicality is perceived and interpreted. The results suggest that PNS, as a processing orientation intention, affects the perceived representativeness of a leadership candidate, which, in turn, affects behavioral intentions, evaluative judgments, and attribution of leadership trust toward the leadership candidate. High PNS individuals were more likely to use both group prototypicality and nonprototypicality to exaggerate the perceived representativeness of a leadership candidate, which affected their likelihood to choose the candidate as a leader, the evaluation of the leadership candidate, and the

² Please note that in order to test for the indirect effect of a mediator, significance of the direct effect between the focal predictor and the dependent variable is not a necessary precondition (Preacher & Hayes, 2004).

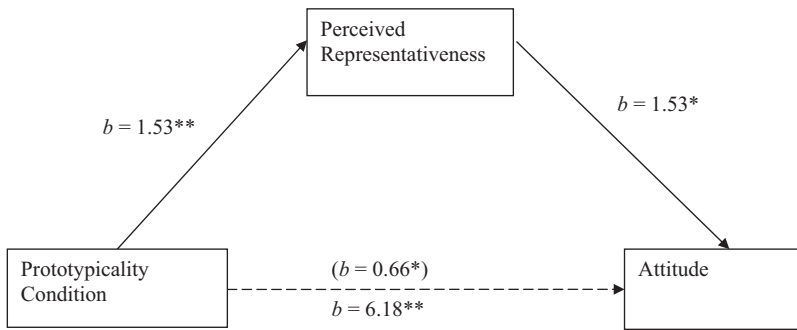


Figure 9. Mediation analysis: attitude. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.01$, $p \leq .001$.

feeling and attitudes toward the leadership candidate. In other words, when confronted with minimal information about group attributes, individuals high in PNS tend to accentuate the degree to which a prototypical candidate is representative of the group or to which a nonprototypical candidate is not representative of the group. This is consistent with the idea that people high in PNS have a strong preference to quickly structure their social environment, which leads to an exaggerated use of indicated group prototypicality and nonprototypicality for subsequent decisions and evaluations.

Limitations

Despite our findings, we have to acknowledge a few caveats in the design and operationalization of this study. First of all, giving participants limited information in regard to the content from which prototypicality is inferred is commonly used for indication of group prototypicality (Abrams et al., 2008). However, the ecological validity of such abstract manipulations can be questioned. It would therefore be interesting to explore whether the

same moderation effect can be observed using a more contextually relevant variable to indicate group prototypicality, for example, the candidate's ability to debate or to defend a certain argument.

Moreover, the direct measurement of PNS before the prototypicality manipulation, and the assessment of the dependent variables, might have made the participants processing tendency particularly salient. In most research exploring the effect of PNS on outcome variables, PNS is assessed independently (e.g., Neuberg & Newsom, 1993). However, due to the design of our study, and the implementing of measuring as part of our prototypicality manipulation, this was not possible. Moreover, we had to collect participants in one session and therefore could not preassess PNS.

Next to these operational limitations, one could also argue that participants might not perceive the position of becoming a panel discussion member as a leadership position. However, leadership is often associated with being representative of one's group's views, norms, and values (Hogg & van Knippenberg, 2003).

Table 2

95% Confidence Intervals for Mediation Hypothesis and Mediated Moderation Hypothesis

	Mediation hypothesis		Mediated moderation hypothesis	
	Lower CI	Upper CI	Lower CI	Upper CI
Candidate choice	5.10	24.31	9.31	29.98
Leadership trust	3.17	18.43	7.68	24.98
Feeling thermometer	0.50	3.29	0.48	3.05
Attitudes	0.25	1.06	0.42	1.46

Note. Confidence intervals (CIs) were obtained using a bootstrapping sample of $N = 5,000$.

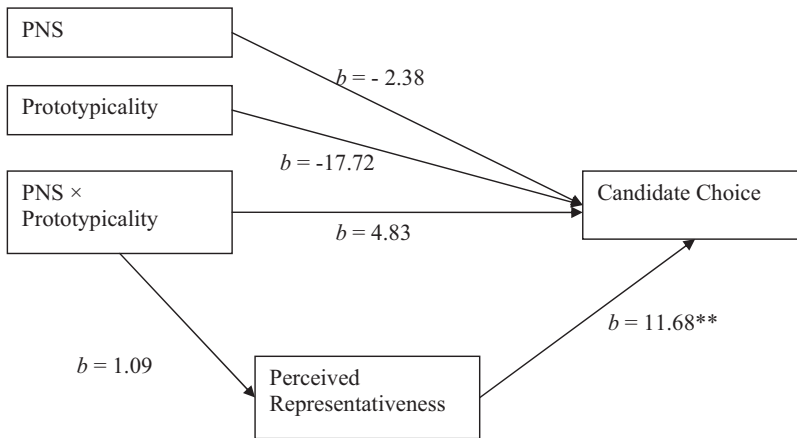


Figure 10. Mediated moderation analysis: candidate choice. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.59$, $p = .001$.

We therefore believe that representing student's views in a prestigious open round-table discussion with local politicians and university members is a position that reflects the definition of leadership.

Implications

The social identity approach of leadership shows that leader group prototypicality is important not only for leaders who represent, for example, politicians or student representatives, but also for leaders within companies or organizations (e.g., Cicero, Pierro, & van Knippenberg, 2007). This is because prototypicality is linked to social attraction, which affects the

amount of influence individuals can have over others and therefore helps to transform individual action into group action. Because prototypicality can be understood as an individual's cognition on how closely someone embodies the prototype of the group (D. van Knippenberg, 2011), understanding whether there are individual differences in the importance of this perception is beneficial for gaining a deeper insight into intragroup processes such as evaluations of group members and leadership emergence.

Moreover, these data provide insight concerning how PNS may affect the perception and evaluation of nonprototypical targets. Research on deviance has shown that group members that

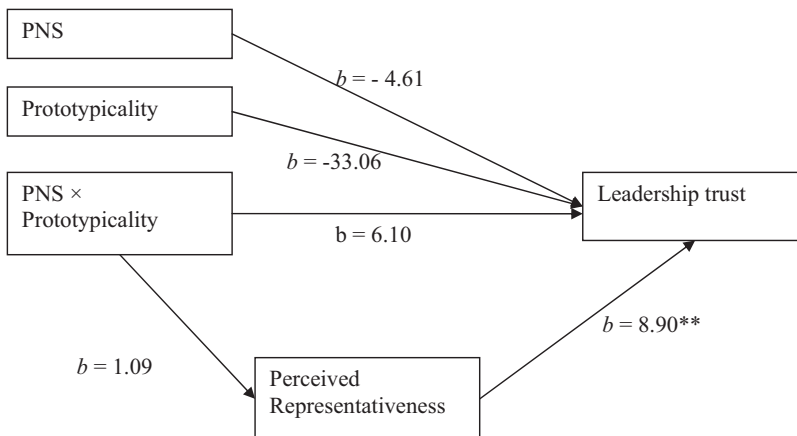


Figure 11. Mediated moderation analysis: leadership trust. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.28$, $p = .001$.

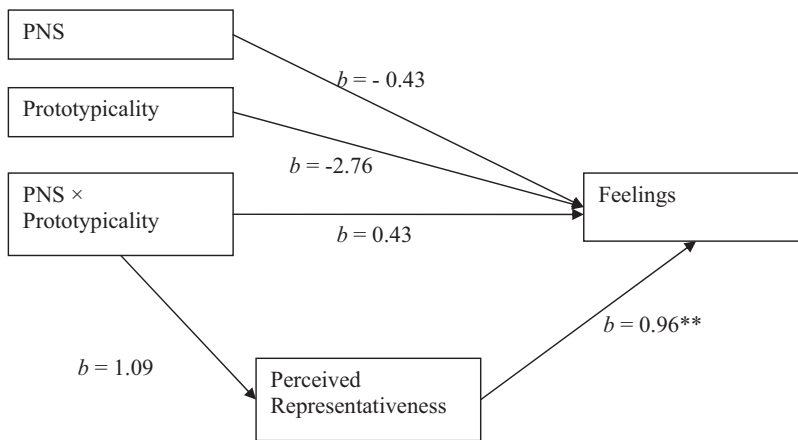


Figure 12. Mediated moderation analysis: feelings. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.13$, $p = .001$.

deviate from the group norm are evaluated less favorably because they threaten group norms and values (Marques, Abrams, & Serodio, 2001; Marques & Paez, 1994). These data shows that PNS might strengthen this perception and therefore extends the literature in regard to how PNS affects intragroup processes. It would be interesting to investigate whether PNS also affects other intragroup processes, for example, the evaluation of deviants, and whether high PNS individuals perceive a deviation from the group norm as correlating with an increase in intragroup tension and conflict. Future research should therefore address whether high-PNS indi-

viduals devalue a deviant or nonprototypical group member by employing an experimental design addressing this question.

However, these data indicate that differences in cognitive orientation may account for some of the variance seen in preference for prototypical leaders. Although group prototypicality may be a crucial determinant of leadership, knowing that individuals' cognitive preferences affects prototypicality perceptions may help to understand why leadership candidates who are not obviously fitting to the group prototype are more prone to be rejected. Moreover, because nonprototypical leaders are sometimes given

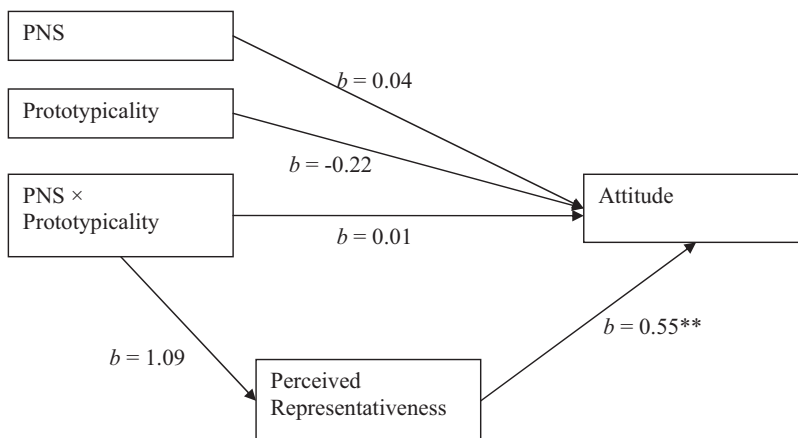


Figure 13. Mediated moderation analysis: attitude. * $p \leq .05$. ** $p \leq .001$. Sobel $z = 4.13$, $p = .001$.

greater license to innovate (Abrams et al., 2008; Randsley de Moura et al., 2011), gaining a deeper understanding of the cognitive processes undermining the appeal of nonprototypical leadership candidates may help increase chances of achieving innovation and change within groups and organizations.

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