

Implicit motives and leadership performance revisited: What constitutes the leadership motive pattern?

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Abstract Previous research suggests that a combination of high need for power, low need for affiliation, and high activity inhibition—the so-called leadership motive pattern—is related to high leader effectiveness. However, when studying this relation, research has mainly relied on a typological approach based on dichotomous configurations of motives instead of using a dimensional approach via regression analysis with interaction terms. Applying the latter approach, we explored separate and interactive effects of need for power, need for affiliation, and activity inhibition on managerial performance. We administered picture story exercises to 70 managers, and found the three-way interaction between predictors to account for increases in income and team goal attainment. Follow-up analyses indicated that managers are most successful when they are high in all three predictors.

Keywords Need for affiliation · Need for power · Activity inhibition · Leadership motive pattern · Leadership performance

Introduction

People differ with regard to the incentives they are striving for. In a work team, for example, some people are motivated when guiding the group through a task. Others strive for maintaining a good climate, while still others are mainly motivated to work when they can compete with other teams. Such affective preferences for certain classes of incentives are called *implicit motives* (McClelland 1985; McClelland et al. 1989). Implicit motives are not consciously represented (hence the term implicit), but they select, orient, and direct behavior in incentive-laden situations and thereby influence long-term outcomes such as career success or well-being (McClelland 1980, 1985).

Because implicit motives and thus the dispositions to act in a certain way (Hofer and Busch 2011) vary between individuals, people respond differently to the same incentives and therefore are also differentially effective in a given situation. Beginning in the 1970s, McClelland, Winter, and their colleagues started to investigate this assumption in the context of leadership. They analyzed the impact of motives on the effectiveness of managers and political leaders. In several studies they demonstrated that effective leaders are characterized by a certain motive combination, which they called the leadership motive pattern (LMP; McClelland and Boyatzis 1982; McClelland and Burnham 1976; Winter 1978, 1991). According to this research, the LMP represents a combination of high implicit need for power (*nPow*), low implicit need for affiliation (*nAff*), and a high amount of activity inhibition (AI). Individuals high in *nPow* show strong energetic actions that have an impact on others, elicit strong emotions in others, and have a high concern for reputation or position (Winter 1973). By contrast, individuals high in *nAff* strive for establishing, maintaining, or restoring harmonious relationships with others (Heyns et al. 1958).

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They spend more time communicating with others, are more sensitive to social signals, and are primarily concerned with maintaining pleasant relationships with close others (McClelland 1985). AI, the third constituent variable of the LMP, is not an implicit motive itself, but a stable tendency to refine and modulate the behavioral expression of motives (Schultheiss et al. 2009). For example, if *nPow* is high and AI is low, power is used for personal aggrandizement (called personalized power). When combined with high AI, *nPow* is satisfied in a socially intelligent way (called socialized power). McClelland and Boyatzis (1982) state that high *nPow* combined with high AI motivates leaders to influence others for the attainment of organizational goals, while low *nAff* helps a manager to pursue these goals without accounting for personal requirements of team members or worrying about being liked (McClelland and Boyatzis 1982).

Even though management success is assumed to be the result of a complex confluence of motives and AI, their interactive effects have rarely been considered in studies on motives and leader effectiveness. Instead, the majority has analyzed the LMP in terms of a dichotomous, typological index. According to McClelland and Boyatzis (1982), leaders possess the LMP if their *T* score of *nPow* is greater than or equal to 45, and greater than or equal to the *T* score of *nAff*; the *T* score of AI is greater than the median *T* score, and the raw score of AI is greater than or equal to 2. Several authors have reflected on the configuration of motives and the composition of the LMP (McClelland 1992; McClelland and Boyatzis 1982; Spangler and House 1991). They concluded that regardless of the loss of information, such typological configurations of motive scores (like the LMP) are more suitable in predicting outcomes than their linear additive combinations (McClelland and Boyatzis 1982). We believe this conclusion to be premature, because a specific configuration of three predictors, such as the LMP, represents a three-way interaction effect in which only the “cell” (in the language of ANOVA-oriented designs) of the predicted configuration predicts an outcome in one way, whereas all other configurations predict it in another way. Whether the LMP actually represents such an interaction effect, however, was never properly tested via regression analysis in the cited studies. It thus remains unclear whether the use of the LMP in the literature is statistically justified.

In the present study we therefore want to explore whether the constituents of the LMP, *nPow*, *nAff*, and AI, interact in predicting leadership performance. We assessed the implicit motives of managers working in various German companies and organizations with a picture story exercise (PSE). Managers' performance was measured via team goal attainment and developments in income as reported by the managers. The percentage of goals met by a team is a commonly used measure of team performance (Lowe et al. 1996)

and one of the most prevalent indicators of leadership effectiveness (Yukl 2012). Changes in income, on the other hand, are among the most frequently used indicators of extrinsic career success (Nicholson 2000). They suggest how successful a manager is in building her or his career (Dilchert and Ones 2008; for an overview of studies applying salary growth see Arthur et al. 2005). We tested if (a) the three-way interaction of *nPow*, *nAff*, and AI is significant above and beyond main and two-way interaction effects of these variables and (b) if it is, whether it is the specific configuration of high *nPow*, low *nAff*, and high AI (i.e., the LMP) that predicts managerial performance.

Method

Procedure

We contacted various German companies and non-profit organizations to recruit managers for a study on leadership behavior and development (cf. Nübold et al. 2014). As an incentive for participation we offered comprehensive individual feedback and consulting for interested managers. In total, 89 managers agreed to participate in the study. First, they were administered a PSE, which was either conducted during interviews or sent to the managers by e-mail. Following the PSE, managers were distributed questionnaires comprising items on demographics and leadership performance as well as on the economic environment of their organization and characteristics of their team. Within the subsequent three weeks, managers filled in and returned the questionnaires.

Participants

Of the 89 managers partaking, 17 did not complete the PSE at all. Another one did not produce enough material for a sound coding of the stories (63 words for the six pictures presented; Smith et al. 1992). One more manager stated not to have a proper team and therefore also had to be excluded from the sample. Analyses were based on a final sample of $N = 70$ managers aged between 28 and 64 years ($M = 44.03$; $SD = 6.64$). Three quarters were male (77.1 %). Participants had an average work experience of 19.02 years and had been in leading positions for about 10 years ($M = 10.50$; $SD = 6.61$), remaining in their actual managerial position for an average of 4.35 ($SD = 3.61$) years at that time. Managers were responsible for a mean of 11.34 employees ($SD = 8.10$) and pursued management careers. Most of them held a polytechnic or university degree (81 %). Twenty percent of the participants belonged to a small or medium-sized company with up to 500 employees, 75 % were

working for companies with 500–50,000 employees, and 5 % worked for companies with more than 50,000 employees. Organizations represented various industrial sectors as well as the non-profit sector (manufacturing industry 23.5 %, service industry 33.8 %, non-profit organizations 25 %, others 17.7 %).

Measures

Measures of nPow, nAff, and AI

In order to assess *nPow*, *nAff*, and *AI*, managers were administered the six-picture PSE described by Schultheiss and Brunstein (2001), which includes the pictures *architect at a desk*, *women in laboratory*, *ship captain*, *couple by a river*, *trapeze artists*, and *night club scene* (cf. McClelland 1975; Smith 1992). During the PSE- interview we presented each picture for about 30 s to the participants. After that, managers were given 5 min per picture to write a story about the situation shown, about who the people might be and about what might happen next (Veroff 1992; recommended by Smith et al. 1992). Summed across the six stories, participants wrote 489 words on average ($SD = 147$), with a range from 159 to 1,082 words. The stories were scored for *nPow* and *nAff* by two well-trained coders (showing category agreement above 0.85 with the calibration material) in terms of Winter's (1994) coding manual for implicit motives. Coding discrepancies were resolved through discussion so that a final coding consensus resulted. In total, motive imagery ranged between 0 and 11 for *nPow* ($M = 3.17$; $SD = 2.32$) and 0 and 9 for *nAff* ($M = 3.17$; $SD = 2.13$). About 10 % of the material (48 PSE-stories) was additionally coded by a third experienced coder. The correlations between this latter coding and the coding consensus of coders one and two were $r = 0.87$ for *nPow* and $r = 0.94$ for *nAff* (both $p < 0.01$). *AI* was measured by counting how often the word “not” was mentioned in the PSE ($M = 3.89$; $SD = 2.79$).

Measures of team goal attainment and developments in income

As indicators of leadership performance, we assessed goal attainment of a manager's team and developments in the manager's income. For assessments of goal attainment, managers were asked to evaluate last year's performance of their team relative to the goals that were set, ranging from 1 = *not attained* (0 %) to 6 = *clearly exceeded* (>150 %) in steps of 25 %, but omitting the 50 % option. Managers stated that, on average, most teams had been successful in attaining their goals ($M = 3.89$; $SD = 0.96$). For assessments of income, managers were asked to rate how their income had developed within the previous 12 months. The response scale

ranged from 1 = *intense decrease* to 5 = *intense increase*, with 3 as a no-change midpoint. Overall, managers reported slight increases in income ($M = 3.64$; $SD = 0.82$).

In our study, we relied on self-reported single-item measures of the outcome variables. Although representing subjective evaluations, self-reports may differ in their degree of objectivity depending on the extent of emotional and cognitive processing a rating demands (Frese and Zapf 1988). If processing requirements are low, self-reports are said to constitute objective measures (cf. Frese and Zapf 1988). Evaluating the degree of goal attainment of one's team, as well as changes in one's income does not implicate high cognitive and emotional processing on the part of the manager, since the assessment bears on facts. Therefore, we expect that self-reports are suitable for objectively measuring these outcomes. Support for this assumption comes from Judge et al. (1995). In a sample of more than 1,300 managers they showed that self-reports on salary converge with archival data. The average deviation between these kinds of measures was only about 1 %. Moreover, due to privacy concerns, objective organizational data on salary is hard to obtain. That is why in earlier studies income has been mainly assessed via self-reports (Dilchert and Ones 2008). Employee performance, on the other hand, of which team goal attainment forms a part, has commonly been assessed via supervisor ratings (e.g., Lai et al. 2013; Wright and Cropanzano 2000; Ziegler et al. 2012). These ratings are often integral components the companies' performance appraisal system (cf. Lai et al. 2013; Minbashian et al. 2013; Ziegler et al. 2012). Managers are thus familiar with this kind of rating. Usually, such performance ratings consist of single-item measures. Single-item measures have been criticized for having unknown reliability and validity (Sackett and Larson 1990). However, Sackett and Larson (1990) argue that single-item measures are appropriate if the construct of interest is sufficiently narrow, if it is one-dimensional, and if the construct is clear to the participants. Although under deviating circumstances single-item measures may yield different results than multi-item measures of the same construct (see Wilkin 2013), they are indeed reliable if these requirements are met (see Wanous and Hudy 2001). Team goal attainment and developments in a manager's income are both narrow, one-dimensional constructs, that are clear to the participants. Given these deliberations, we expect that this operationalization yields reliable and objective measures of the outcomes of interest.

Results

Initially, we analyzed whether the drop-out of 19 managers was systematic. Results showed that managers entering the final sample did not significantly differ from those being

excluded with regard to demographics or the study's predictor and criterion variables (all $ps > 0.10$). Moreover, we examined whether the scores for motive imagery significantly correlated with the number of words written in the PSE. All three PSE-derived predictor variables displayed significant correlations with PSE protocol length ($nPow$ $r = 0.44$, $p < 0.001$; $nAff$ $r = 0.40$, $p < 0.01$; and AI $r = 0.62$, $p < 0.001$). Therefore, motive sum scores were corrected for word count by regression and the residuals were converted to z scores (cf. Schultheiss and Pang 2007). Correlations of $nPow$, $nAff$, AI , outcome variables, and gender are displayed in Table 1. Men and women did not reliably differ on any of the predictor or outcome variables.

We then conducted hierarchical regression analyses predicting team goal attainment and changes in a manager's income. Main effects were entered in the first step of the regression, all two-way interaction terms as the second step, and the three-way interaction term as the third step. As displayed in Table 2, the three-way interaction of $nPow$, $nAff$, and AI significantly accounted for variance increments in goal attainment of a manager's team as well as developments in her or his income. No other block of predictor variables accounted for a significant amount of variance.¹

To illustrate the specific form of the three-way interaction, we followed the guidelines provided by Dawson and Richter (2006). We first plotted the simple slopes for both measures of leadership performance. As shown in Fig. 1, the relationship between $nPow$ and leadership performance was closer when both $nAff$ and AI were high. We then tested whether differences in slopes are actually statistically significant by applying slope difference tests (Dawson and Richter 2006). Results confirmed that when $nAff$ and AI were both high, slopes for the relationship of $nPow$ with either measure of managerial performance differed significantly or marginally from all other slopes (slopes (1) vs. (2) team goal attainment: $t(68) = 3.52$, $p < 0.01$; developments in income: $t(68) = 2.39$, $p < 0.01$; slopes (1) vs. (3) team goal attainment: $t(68) = 3.08$, $p < 0.01$; developments in income: $t(68) = 3.06$, $p < 0.01$; slopes (1) vs. (4) team goal attainment: $t(68) = 3.11$, $p < 0.01$; developments in income: $t(68) = 1.96$, $p < 0.10$; see Fig. 1). Among the remaining slopes no difference was statistically significant ($p > 0.05$). Thus, findings demonstrate that

higher leadership performance results from the combination of high levels in all three predictors.²

Discussion

With this study we tested the validity of the LMP pattern as an outcome of the interaction of $nPow$, $nAff$, and AI for the prediction of managerial performance. We found that these constructs do indeed interactively predict management performance, as assessed through goal attainment of a manager's team as well as developments in her or his income. For each outcome, the predictors' three-way interaction explained a significant amount of incremental variance above and beyond main and two-way interaction effects. Further analyses revealed, however, that in contrast to earlier research on the LMP, which suggested that managers high in both $nPow$ and AI , but low in $nAff$ are most effective, high levels in all three predictors simultaneously were most conducive to higher levels of management performance.

Our findings suggest that McClelland and colleagues were correct when they emphasized the importance of motivational syndromes consisting of two or more motivationally relevant variables. But they also suggest that such syndromes should not be tested as a priori typological configurations of these variables, because it is not certain that each variable included in the configuration always contributes substantially to the predictive success of the overall typological pattern. This is reflected in the fact that past studies have sometimes included only $nPow$ and $nAff$ in the LMP (see Jacobs and McClelland 1994; Winter 1987) and sometimes included the three variables we also tested in our research (see McClelland and Boyatzis 1982; McClelland and Burnham 1976; Winter 1978, 1991). And neither is it certain that the variables constituting a typological pattern do so in the same direction when a

¹ According to Spangler and House (1991), if the composition of the LMP is to be tested the classical index definition by McClelland and Boyatzis (1982) should be included in the analyses. We therefore adjusted the T score-based definition of McClelland and Boyatzis (1982) to z scores and reran our analyses entering the dichotomous LMP index in the first step of the regressions. Still, the three-way interaction significantly predicted both measures of leader performance.

² In the study by McClelland and Boyatzis (1982) all managers considered were males. As in our study, 22.9 % of the participants were females we additionally reran the analyses with gender as a covariate. Findings, however, remained unchanged if gender was entered as the first step of the regression. Results of the subsequent slope difference tests (Dawson and Richter 2006) were also in line with the findings not adjusting for gender. Considering the outcome goal attainment, slope (1) significantly differed from all other slopes, whereas slopes (2), (3), and (4) did not significantly differ from each other. Significant differences between slope (1) and slopes (2) and (3) were found for the outcome developments in a manager's income. The difference between slope (1) and slope (4) for this outcome was, again, only by tendency significant, while differences between slopes (2), (3), and (4) were not significant. Besides rerunning the analyses controlling for gender, we also examined the contribution of the three-way interaction within the sample of male managers solely. Irrespective of the outcome studied, within this subsample regression weights of the three-way interaction term were as well positive.

Table 1 Correlations of manager’s gender, *nPow*, *nAff*, AI, and the outcome variables

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)
(1) Gender							
(2) <i>nPow</i>	0.00	1.00	−0.14				
(3) <i>nAff</i>	0.00	1.00	−0.05	−0.06			
(4) AI	0.00	1.00	0.09	−0.02	−0.31*		
(5) Goal attainment of the team	3.89	0.96	−0.08	−0.11	0.09	0.19	
(6) Developments in income	3.64	0.82	−0.14	0.06	−0.11	−0.11	0.36**

Correlations rest on *z* scores of *nPow*, *nAff*, and AI. Gender: male = 0, female = 1

* $p < 0.05$; ** $p < 0.01$

Table 2 Hierarchical regression analyses predicting goal attainment of a manager’s team and developments in his income within the last 12 months

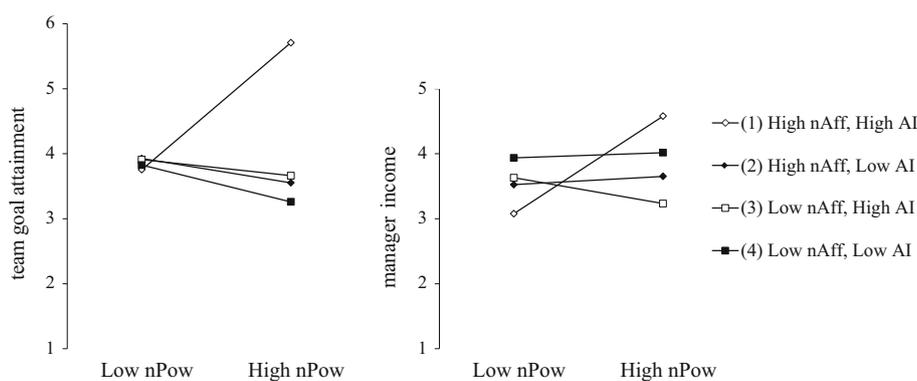
Variable	Step 1				Step 2				Step 3			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
<i>Goal attainment of the team</i>												
Step 1												
<i>nPow</i>	−0.10	0.11	−0.10	−0.83	−0.04	0.12	−0.05	−0.38	0.10	0.12	0.10	0.80
<i>nAff</i>	0.14	0.12	0.15	1.20	0.18	0.12	0.19	1.49	0.29	0.12	0.30	2.37*
AI	0.22	0.12	0.23	1.86 [†]	0.27	0.12	0.28	2.23*	0.31	0.12	0.32	2.70**
Step 2												
<i>nPow</i> × <i>nAff</i>					0.20	0.12	0.22	1.64	0.30	0.12	0.33	2.42*
<i>nPow</i> × AI					0.26	0.11	0.31	2.27*	0.33	0.11	0.39	2.95**
<i>nAff</i> × AI					0.03	0.09	0.04	0.30	0.19	0.11	0.25	1.77 [†]
Step 3												
<i>nPow</i> × <i>nAff</i> × AI									0.25	0.10	0.40	2.68**
R^2				0.07				0.15				0.23*
ΔR^2				0.07				0.08				0.09**
<i>Developments in income</i>												
Step 1												
<i>nPow</i>	0.04	0.10	0.04	0.37	0.04	0.10	0.04	0.35	0.16	0.11	0.20	1.52
<i>nAff</i>	−0.12	0.10	−0.15	−1.18	−0.10	0.11	−0.12	−0.93	0.00	0.11	0.00	0.02
AI	−0.13	0.10	−0.16	−1.23	−0.12	0.11	−0.14	−1.09	−0.08	0.10	−0.09	−0.75
Step 2												
<i>nPow</i> × <i>nAff</i>					0.16	0.11	0.20	1.40	0.24	0.11	0.31	2.21*
<i>nPow</i> × AI					0.05	0.10	0.06	0.46	0.11	0.10	0.16	1.12
<i>nAff</i> × AI					0.05	0.08	0.08	0.61	0.20	0.09	0.30	2.09*
Step 3												
<i>nPow</i> × <i>nAff</i> × AI									0.23	0.08	0.43	2.78**
R^2				0.04				0.07				0.17
ΔR^2				0.04				0.03				0.10**

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

dimensional approach is applied. This argument is underscored by our finding that in our study, *high nAff* was part of the pattern represented by the three-way interaction term, as opposed to low levels in this variable as postulated

in past research on the LMP. Researchers who blindly follow the configurational approach espoused by McClelland (1992) will never notice these issues; using a hierarchical regression approach makes them transparent.

Fig. 1 Regression slopes for the three-way interactions of *nPow*, *nAff*, and AI with the outcome variables team goal attainment and developments in a manager's income



Why did high *nAff*, in conjunction with high levels in both *nPow* and AI, contribute to management success in the present research? Whereas McClelland and Boyatzis (1982) reasoned that managers high in *nAff* are overly concerned with establishing good relations with followers and are inclined to place these relationships above necessary organizational decisions, Cornelius and Lane (1984) and Kirkpatrick, et al. (2002) have reported contradictory findings. Drawing on PSEs or vision statements of managers, they found *nAff* to be related to more positive attitudes and higher performance of work teams, at least in first-line management. We therefore speculate that *nAff* is likely to motivate concern, respect, appreciation, and support for followers, all of which characterize considerate leader behaviors (Bass 1990) and which are known to contribute to leader effectiveness (Judge et al. 2004). Moreover, *nAff* possibly favors high quality leader-member exchange relationships, which positively relate to followers' job performance (see Dulebohn et al. 2012). Adhering to the norm of reciprocity (Gouldner 1960), followers might raise their work effort in return for their leaders' consideration and trust, yielding higher goal attainment. High rates of goal attainment, in turn, might be among the factors favoring the promotion of a leader.

Perhaps we capture in our results a secular trend in management, moving from hierarchical forms of management in companies like the one studied by McClelland and Boyatzis (1982) between the 1950s and 1970s to more lateral, considerate styles of management prevalent in modern companies, a trend also noticed by Burnham (1997). Boyatzis et al. (2006) argued that being considerate and supportive helps leaders to sustain their effectiveness. According to these authors, coaching others with compassion acts like an antidote to stressors inherent in the leadership role, making leaders effective for the long haul. Coaching with compassion aims at helping followers to pursue intentional change processes (Boyatzis 2003, as cited in Boyatzis et al. 2006) and depends on the leader's empathy, care, and willingness to react to followers' feelings (Boyatzis et al. 2006). As such, it helps followers to

develop personally and professionally and is not primarily geared towards the organization's benefit (Boyatzis and McKee 2005). However, in helping and coaching followers, leaders also exert a benign form of influence. Therefore, the combination of high *nPow* and high *nAff* appears to be beneficial for coaching. In this context, AI may further help keeping leaders sensitive to the situational demands and affordances of coaching and thus makes the difference between intrusive, overbearing forms of helping (low AI) and sophisticated, effective coaching (high AI). Hence, we conclude, that the interplay of high *nPow*, *nAff*, and AI motivates leaders to coach their followers with compassion. On these grounds, we refer to the interactive motive combination of high *nPow*, high AI, and high *nAff* as the *Compassionate Leadership Profile* (CLP).

The replicability of the CLP needs to be tested in future studies that also include management process and outcome measures from multiple sources (manager, team member, observation) specifically designed to illuminate the behaviors leaders characterized by this motivational pattern show: Do acts of coaching and care, showing empathy, and reacting to follower's feelings lead to higher management effectiveness?

Other changes in leadership culture likely occurred during the more than 60 years since McClelland and Boyatzis (1982) started their research. Whereas these authors studied male managers only, our data are based on male and female managers. Note, however, that women did not differ from men in motive or outcome measures in the present study. Moreover, our study has been conducted within a different cultural context, and was based on a diverse sample of managers from various non-profit and profit organizations whereas McClelland and Boyatzis (1982) studied managers in one company only. Whether any of these differences led to the changes in the motivational predictors of leadership performance or whether a combination of them contributed to our findings deserves further examination.

Apart from specific leader behaviors, traits like the Big Five personality factors have also been studied in relation

with leadership performance. Meta-analyses corroborate that extraversion is of particular importance for being an effective leader (Judge et al. 2002; Do and Minbashian 2014). Also, agreeableness is positively associated with leadership effectiveness (Judge et al. 2002). On the face of it, both traits seem to converge with *nAff* and *nPow*. Research, however, emphasizes that self-reported traits like the Big Five and implicit motives are independent of each other (Schultheiss and Brunstein 2001; Köllner and Schultheiss 2014). Therefore, findings of meta-analyses on the Big Five may not be generalized to the contribution of implicit motives to leadership performance.

To conclude, in the present research we confirmed in a diverse German sample of managers that the variables constituting the LMP predict leadership performance. Deviating from earlier research, we used a hierarchical regression approach to confirm that the three-way interaction of *nPow*, *nAff*, and AI accounts for incremental variance in measures of management success. Detailed analyses revealed that this interaction effect differs from the LMP: in addition to high levels of *nPow* and AI, high *nAff* was needed for managers to show higher performance. This pattern is what we call the Compassionate Leadership Profile.

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