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Feenstra, Sanne; Jordan, Jennifer; Walter, Frank; Yan, Jin; Stoker, Janka I.

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## **The Hazard of Teetering at the Top and Being Tied to the Bottom: The Interactive Relationship of Power, Stability, and Social Dominance Orientation with Work Stress**

Sanne Feenstra\*

*University of Groningen, The Netherlands*

Jennifer Jordan

*IMD, Lausanne, Switzerland*

Frank Walter

*Justus-Liebig-University Giessen, Germany*

Jin Yan

*Zhejiang University, China*

Janka I. Stoker

*University of Groningen, The Netherlands*

This study examines the roles of power, stability, and social dominance orientation (SDO) for work stress. Initial laboratory research has demonstrated that power and the stability of one's power position interact to influence stress. Using a sample of Chinese managers, we replicate and extend this finding in an organisational field setting, illustrating that the interactive role of power and stability hinges on individuals' SDO. Individuals higher (but not lower) in SDO experienced more work stress in unstable high-power and stable low-power positions, compared to their counterparts in stable high-power and unstable low-power positions. These results underscore the role of stability for understanding the power–stress relationship and emphasise individual differences in needs and motivations as an important boundary condition.

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\* Address for correspondence: Sanne Feenstra, Faculty of Economics and Business, Department HRM/OB, University of Groningen Nettelbosje 2, 9747 AE Groningen, The Netherlands. Email: s.feenstra@rug.nl

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## INTRODUCTION

Power, defined as asymmetric control over valued resources (Magee & Galinsky, 2008; Westphal & Zajac, 1995), is a pervasive element of human and non-human interactions (Anderson & Brion, 2014; Sapolsky, 2005). High power has been associated with numerous favorable outcomes in humans, such as reduced stress experiences (Schmid & Schmid Mast, 2013; Sherman et al., 2012). Research on non-human primates suggests, however, that high power can be stressful as well, especially when one's power position is threatened (i.e. when the power hierarchy is unstable; Sapolsky, 1993, 2005; Sapolsky & Share, 1994). Low power, in contrast, appears particularly stressful when there is no prospect of improvement on the power ladder (i.e. when the power hierarchy is stable; Barnett, 1955; Sapolsky, 1993). Collectively, this research on non-human primates suggests that stress is not merely a function of variations in power, but instead, stems from the prospect of imminent resource losses (unstable high power) or an enduring lack of resources (stable low power). With stress influencing individuals' health and well-being (Dimsdale, 2008; Eysenck, 1988; Steptoe & Kivimäki, 2012), it is important to better understand these potentially stressful consequences of unstable high power and stable low power among humans as well.

To date, however, only a handful of studies have examined the power–stress linkage in human samples (Hellhammer, Buchtal, Gutberlet, & Kirschbaum, 1997; Mehta, Jones, & Josephs, 2008; Schmid & Schmid Mast, 2013; Sherman et al., 2012), and only one of these has investigated the role of power stability (i.e. Jordan, Sivanathan, & Galinsky, 2011). While informative, this latter work is based on laboratory research with student participants, and the authors primarily drew on findings and arguments from animal research to support their reasoning. Furthermore, more recently, Scheepers, Röell, and Ellemers (2015) examined the interactive effects of power and stability for individuals' physiological threat and challenge reactions, again utilising a laboratory design with student participants. Hence, important questions about external validity and generalisability (e.g. to organisational field settings where power, and its stability, are particularly salient) remain to be addressed. Moreover, as humans and non-human species differ in their psychological needs and motivations (Gosling, 2001; Harlow, Gluck, & Suomi, 1972), we believe that the interactive relationship of power and stability with stress among humans is more complex—at least in organisational field settings—than the existing literature suggests. Research on social dominance orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994) has shown, in particular, that individuals differ fundamentally in their preferences for power and hierarchical differentiation. Therefore, we expect that individual differences in SDO will serve as an important contingency variable for the joint role of power and stability for human stress experiences.

Consequently, the purpose of the current investigation is twofold. First, by examining the interactive role of power and stability for individuals' stress experiences, we seek to constructively replicate previous laboratory findings (i.e. Jordan et al., 2011; see also Scheepers et al., 2015) in an organisational field context. Scholars have noted that such constructive replication is an important, yet often neglected, part of scientific progress, strengthening our confidence in the validity of observed relationships and promoting knowledge accumulation by elucidating the scope and potential boundaries of such effects (Asendorpf et al., 2013; Eden, 2002; Jasny, Chin, Chong, & Vignieri, 2011). Furthermore, researchers have called for the investigation of power's consequences in organisational field settings, arguing that "too few studies attempt to assess the thoughts, feelings, and behaviors of actual power-holders" (Flynn, Gruenfeld, Molm, & Polzer, 2011, p. 498). Second, by examining SDO as a moderator of the power–stability interaction on individuals' work stress, our goal is to add new perspectives to our theoretical knowledge on power–stress linkages, illustrating that differences in individuals' attitudes and worldviews should be considered to better understand such associations.

## POWER, STABILITY, AND STRESS

Ethological research on non-human species has demonstrated that power and stability interact to affect animals' stress levels (as measured, for example, by the secretion of glucocorticoids, such as cortisol; Blanchard et al., 1995; Creel, Marushacree, & Monfort, 1996). This research has found stress to be more pronounced among animals higher in the power hierarchy when the hierarchy was unstable rather than stable (Manuck, Marsland, Kaplan, & Williams, 1995; Sapolsky & Share, 1994, 2004), whereas animals lower in the power hierarchy experienced more stress when the hierarchy was stable rather than unstable (Barnett, 1955; Sapolsky, 1993).

The theoretical reasoning behind this pattern of findings is that power affords animals (e.g. chimpanzees, baboons, wolves, and mice) important resources, such as food, shelter, and mating opportunities (Dewsbury, 1982; Ellis, 1995; Sapolsky, 2005). As such, high power can substantially reduce stress, particularly if power relations are consistent and stable. In this situation, higher-power animals can benefit from superior resources over an extended time period, whereas lower-power animals are cast into a constant state of resource deprivation (Barnett, 1955; Sapolsky, 2005). With unstable power relations, in contrast, this pattern of relationships is reversed; higher-power animals face the tangible risk of resource losses and have to consistently defend their dominant position, whereas lower-power animals face prospects of possible resource gains that can improve their precarious situation (Kaplan, Manuck, Clarkson, Lusso, & Taub, 1982; Manuck et al., 1995; Sapolsky, 1995).

Consistent with this reasoning, a number of studies have shown similar patterns among humans as well. Although not directly examining power–stress linkages, for example, research has found that members of high-status groups feel more threatened when status differences between groups are unstable, whereas members of low-status groups feel more threatened when such status differences are stable (Scheepers, 2009; Scheepers & Ellemers, 2005). Similarly, Knight and Mehta (2017) have demonstrated that individuals assigned to high-status positions experience increased stress when their status position was unstable compared to stable. Finally, Scheepers and colleagues (2015) have found that unstable power relations elicit physiological reactions associated with threat among powerful individuals, whereas such instability triggers physiological reactions associated with challenge among powerless individuals.

As noted before, we are aware of only one study that has directly probed the interactive effects of power and stability on human stress experiences (Jordan et al., 2011), illustrating that participants assigned to unstable high-power and stable low-power conditions experienced more stress, as compared to participants assigned to stable high-power and unstable low-power conditions. Like the research on non-human species discussed above, this latter study used a resource-based reasoning to explain its predictions and findings. The researchers defined unstable high power as “precarious control over valued resources” and stable low power as “persistent lack of control over valued resources”, arguing that these situations are substantially more stressful than stable high power (“enduring control over valued resources”) or unstable low power (“potential control over valued resources”; Jordan et al., 2011, p. 531). This rationale is consistent with prominent stress theories that cast the conservation of resources as a fundamental motive of human action, with actual and expected resource losses and shortages representing major stressors (Hobfoll, 1989, 2001; Lee & Ashforth, 1996). In a first step, the present investigation aims to replicate Jordan and colleagues’ (2011) findings in an organisational field setting. Building on this research, we anticipate that individuals experience more work-related stress in unstable high-power and stable low-power positions, as compared to their counterparts in stable high-power and unstable low-power positions.

### THE MODERATING ROLE OF SOCIAL DOMINANCE ORIENTATION

Basic similarities in the roles of power and stability notwithstanding, it is clear that the specific resources power affords humans are different and more varied than for non-human species (Gosling, 2001; Harlow et al., 1972). Among animals, the resources that accompany high-power positions are critical for survival and fundamental biological processes (e.g. food, reproductive success; Dewsbury, 1982; Ellis, 1995; Sapolsky, 2005). Among humans, in contrast,

power's benefits go beyond tangible resources (e.g. money, shelter, nourishment) to also provide individuals with psychological and social benefits (e.g. prestige, autonomy, and control over others; Fast, Gruenfeld, Sivanathan, & Galinsky, 2009; Keltner, Gruenfeld, & Anderson, 2003; Magee & Galinsky, 2008). Such intangible resources leave room for preferential differentiation, with some individuals attaching greater relevance than others to these immaterial benefits (Altemeyer, 1998; Duckitt, 2001, 2006; Pratto et al., 1994; Son Hing, Bobocel, Zanna, & McBride, 2007). In the current investigation, we propose that such individual differences shape the link between power, stability, and work stress.

Theory and research on social dominance suggest, in particular, that an individual's SDO plays an important role in this regard (Pratto et al., 1994). The SDO construct was initially developed to explain how group-based hierarchies are initiated and maintained, with people higher in SDO being more motivated to preserve strong hierarchical differentiation (Pratto et al., 1994; Sidanius & Pratto, 1999). Some theorists have argued that this general preference for unequal power relations may apply regardless of whether an individual is located towards the higher or lower end of the power spectrum (Sidanius, Levin, Federico, & Pratto, 2001). In other words, individuals higher in SDO may have a tendency to justify existing power relations, even when they are in a low-power position (Jost & Burgess, 2000; Overbeck, Jost, Mosso, & Flizik, 2004).

Other theorists, however, have argued that individuals higher in SDO view the world as a competitive jungle where the "have nots" (i.e. the powerless) lose and the "haves" (i.e. the powerful) win, and that this "social-Darwinist" view of the world, in turn, activates personal motivational goals of power and dominance (Altemeyer, 1998; Duckitt, 2001, 2006). Based on this theoretical perspective, it is logical to expect that in an organisational context, individuals higher in SDO attach greater relevance to the psychological and social resources that accompany high-power positions and, thus, will be more motivated to maintain and acquire positions of high power, as compared to individuals lower in SDO. Consequently, people higher in SDO should experience more stress when they are unable to maintain and/or acquire high-power positions. Supporting this rationale, research has linked SDO to individuals' desire for interpersonal dominance and power (Altemeyer, 1998; Duriez & Van Hiel, 2002), control over resources (De Cremer, Cornelis, & Van Hiel, 2008), and social status (Pratto, Stallworth, Sidanius, & Siers, 1997; Sidanius & Pratto, 1999). Furthermore, scholars have shown that people higher in SDO are more likely than people lower in SDO to assume high-power positions (Son Hing et al., 2007).

Building on this theoretical and empirical foundation, we predict that SDO moderates the two-way interaction of power and stability with work stress. This interactive relationship should be more pronounced for individuals higher

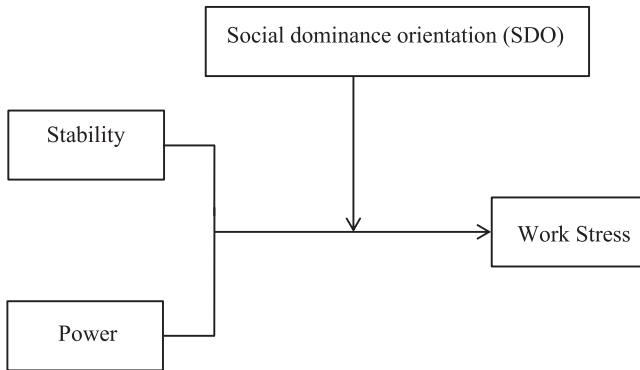


FIGURE 1. Predicted three-way interaction of stability, power, and SDO with work stress: Individuals higher (but not lower) in SDO are predicted to experience more stress in unstable high-power and stable low-power positions, as compared to their counterparts in stable high-power and unstable low-power positions.

rather than lower in SDO. For individuals higher in SDO, in particular, unstable high power should be more stressful than stable high power, because it entails the risk of salient resource losses and social decline (Jordan et al., 2011). Similarly, stable low power should be more stressful than unstable low power for high-SDO individuals, because they would see themselves as part of the undesirable group of “have-nots” (Duckitt, 2001, 2006), with little prospect of escaping this precarious position. Individuals lower in SDO, in contrast, should attach less relevance to power and its associated psychosocial resources (e.g. Altemeyer, 1998; Duriez & Van Hiel, 2002; Son Hing et al., 2007). As such, their stress levels are less likely to be affected by their current power position and its (in)stability. We therefore predict a three-way interaction of power, stability, and SDO with work stress (see Figure 1), such that individuals higher (but not lower) in SDO experience more stress in unstable high-power and stable low-power positions, as compared to their counterparts in stable high-power and unstable low-power positions.

## METHOD

### Participants and Procedures

Participants were Chinese managers from various organisations, industries, and hierarchical levels. Specifically, they were members of an MBA program at a major university in eastern China. Participants were approached by their former lecturer with the request to complete an online survey about their experiences at their workplace. To encourage participation, participants were



reimbursed 20 Renminbi (RMB; around \$3) for their time taking the survey. The survey included measures of power, stability, SDO, and work stress. To alleviate common method concerns, we separated the work stress measure from the other measures through several unrelated items (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In total, we contacted 252 managers, of which 167 completed the survey (response rate = 66%).<sup>1</sup> Eighteen participants were excluded because they failed the attention check (see below), and seven participants were excluded because they entered redundant identification numbers. Hence, our final sample consisted of 142 participants ( $M_{\text{age}} = 33.25$ ,  $SD = 5.32$ ; 41.5% female).<sup>2</sup> The majority of participants supervised between one and five direct reports, and their average organisational tenure was 9.05 years ( $SD = 4.81$ ).

## Measures

All measures were translated from English to Mandarin Chinese using a back-translation procedure. Unless indicated otherwise, all measures were rated on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*).

*Stability.* We measured the stability of participants' power position using three items derived from common definitions of stability (Maner, Gailliot, Butz, & Peruche, 2007; Tajfel & Turner, 1979, 1986). These items were, "I think my position in the organisation will probably soon change" (reverse-coded), "I think my position in the organisation will probably remain the same for some time", and "I feel my position in the organisation is stable",  $\alpha = .66$ .<sup>3</sup>

*Power.* We used two items to capture participants' power (Lammers & Imhoff, 2016; Lammers, Stoker, Jordan, Pollmann, & Stapel, 2011; Lammers, Stoker, & Stapel, 2010). First, we measured *subjective power* by asking

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<sup>1</sup> The present data were collected in two separate waves (i.e. within two separate cohorts of executive MBA students, about one year apart). We combined the data from both waves into one dataset, given that both waves targeted highly similar populations and used identical data collection procedures and measures. Moreover, we note that controlling for the wave of data collection did not meaningfully alter our findings or conclusions.

<sup>2</sup> One participant did not complete the stability measure, two participants did not complete the power measures, and two participants did not complete the SDO measure. Hence, the two-way interactions were tested among 139 participants and the three-way interactions were tested among 137 participants.

<sup>3</sup> We acknowledge that the internal consistency reliability estimate for this measure is somewhat low. We note, however, that Cronbach's alpha is a conservative estimate of reliability and is influenced by the number of items (Cortina, 1993). Moreover, Cronbach's alpha increased to .68 when excluding the reverse-coded item, and examining our hypotheses with and without this item yielded equivalent results. Hence, we report findings based on the full three-item measure in the following.



participants, “At your place of work, what level are you in the organisational hierarchy?” We provided participants with a 0–100 slider scale on which they could indicate their subjective power within their organisation (0 = *bottom*; 100 = *top*). In addition, we captured *formal hierarchical power* by asking participants to indicate their position within their respective organisation on a 3-point scale: lower management (coded as 1;  $n = 50$ ), middle management (coded as 2;  $n = 52$ ), or top management (coded as 3;  $n = 38$ ). These two power measures were highly correlated ( $r = .77, p < .001, \alpha = .87$ ). Hence, besides separately testing our study hypotheses based on both of the above measures, we also created a *composite power* measure by first standardising and then averaging the respective items, and we repeated all hypothesis tests using this combined power measure.

*Social Dominance Orientation.* We measured social dominance orientation using Pratto and colleagues’ (1994) 16-item measure. Sample items included, “Some groups of people are simply inferior to other groups” and “To get ahead in life, it is sometimes necessary to step on other groups”,  $\alpha = .72$ .

*Work Stress.* We measured work stress using Motowidlo, Packard, and Manning’s (1986) four-item measure. This instrument has been widely used in research on stress in the workplace, with numerous studies illustrating its reliability and validity (e.g. Bradley, 2007; Chiang, Birtch, & Kwan, 2010; Dubinsky, Yammarino, Jolson, & Spangler, 1995). Sample items included, “I feel a great deal of stress because of my job” and “My job is extremely stressful”,  $\alpha = .72$ .

*Attention Check.* To safeguard data quality, we included an attention check in which participants were asked to “please click answer option 4”. Participants were only included in our final sample if they accurately selected the respective answer option.

*Control Variables.* We considered participants’ age and gender as possible covariates because previous research has shown that these variables are related to work stress (Barnes-Farrell, Rumery, & Swody, 2002; Rauschenbach, Krumm, Thielgen, & Hertel, 2013; Watson, Goh, & Sawang, 2011).

## RESULTS

Table 1 provides descriptive statistics and intercorrelations for all study variables. Consistent with the three-way interaction pattern we predicted, none of the independent variables had a significant bivariate association with work stress. Moreover, none of the control variables were significantly associated with work stress. Therefore, we did not incorporate the control variables in the analyses reported below in order to avoid biased parameter estimates (Becker,

TABLE 1  
Means, Standard Deviations, and Bivariate Correlations

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1. Age	33.25	5.32	–						
2. Gender	0.58	0.50	.11	–					
3. Stability	4.30	0.86	.04	–.17*	–				
4. Subjective Power	63.26	25.68	.25**	.03	.39**	–			
5. Formal Hierarchical Power	1.91	0.79	.27**	–.07	.40**	.77**	–		
6. Power Composite	0.05	1.00	.27**	–.02	.42**	.94**	.94**	–	
7. SDO	3.09	0.50	–.06	.37**	–.14	–.05	–.11	–.08	–
8. Work Stress	4.09	1.03	–.14	.01	.03	.06	.04	.05	.06

*Notes:* *N* ranges from 137 to 142. For gender, 0 = female, 1 = male. SDO = social dominance orientation. \* $p < .05$ ; \*\* $p < .01$ .

2005). Notably, inclusion of the covariates did not alter the pattern of the results or influence our substantive conclusions.<sup>4</sup>

Table 2 depicts results of the moderated hierarchical regression analyses (using standardised predictor variables) used to test our predictions. As expected, we found highly similar and significant two-way interactions between power and stability on work stress using the subjective ( $B = -.21$ ,  $p = .012$ ), formal hierarchical ( $B = -.20$ ,  $p = .011$ ), and composite power ( $B = -.23$ ,  $p = .007$ ) measures. Figure 2 depicts the respective interaction for the composite power measure (see Aiken & West, 1991).<sup>5</sup> Consistent with predictions, a marginally significant negative simple slope for the stability–stress

<sup>4</sup> To further examine our findings' robustness, we (a) repeated the hypothesis tests after excluding two outliers, (b) performed bootstrap analyses on our regression models, and (c) explored participants' educational level and organisational tenure as additional control variables, although we had no a priori theoretical expectations regarding their associations with stress. These analyses showed that, with one exception, all hypothesised interaction coefficients were significant at the .05 level when excluding the two outliers (the two-way interaction with formal hierarchical power was marginally significant,  $p = .082$ ), and all interaction patterns remained virtually unchanged. Furthermore, bootstrap analyses (based on 5,000 resamples) revealed significant coefficients for all hypothesised two-way interactions, both when including and when excluding the outliers. For the bootstrapped three-way interactions, all of the respective coefficients (with one exception) were marginally significant when including the outliers (the three-way interaction with hierarchical power was not significant,  $p = .130$ ), and all of these interaction coefficients were significant when excluding the outliers. Also, using bootstrapping procedures did not meaningfully change any of the interaction patterns. Finally, incorporating the additional control variables did not alter the significance or pattern of the reported results.

<sup>5</sup> The interaction patterns for the two single-item power measures were nearly identical for the two-way and three-way interactions; additional graphs and simple slopes analyses are available from the first author.

TABLE 2  
Regression Results

	Subjective power			Formal hierarchical power			Power composite			
	Two-way interaction		Three-way interaction	Two-way interaction		Three-way interaction	Two-way interaction		Three-way interaction	
	<i>B</i> (SE)	$\Delta R^2$	<i>B</i> (SE)	$\Delta R^2$	<i>B</i> (SE)	$\Delta R^2$	<i>B</i> (SE)	$\Delta R^2$	<i>B</i> (SE)	$\Delta R^2$
<i>Model 1</i>		.01		.00		.01		.00		.01
Stability	-.02 (.10)		.01 (.10)	-.00 (.10)		.02 (.10)		-.02 (.10)		.01 (.10)
Power	.08 (.09)		.10 (.09)	.04 (.09)		.07 (.09)		.07 (.10)		.10 (.09)
SDO			.04 (.09)			.05 (.09)				.05 (.09)
<i>Model 2</i>		.05*		.05*		.04		.05**		.05 <sup>†</sup>
Stability × Power	-.21* (.08)		-.17* (.08)	-.20* (.08)		-.18* (.08)		-.23** (.08)		-.19* (.09)
Stability × SDO			-.06 (.09)			-.03 (.09)				-.05 (.09)
Power × SDO			.12 (.09)			.05 (.09)				.09 (.09)
<i>Model 3</i>		.03*		.03*		.03 <sup>†</sup>				.03*
Stability × Power × SDO			-.17* (.08)			-.15 <sup>†</sup> (.07)				-.17* (.08)

Notes: *N* ranges from 137 to 139. SDO = social dominance orientation. <sup>†</sup> $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ .

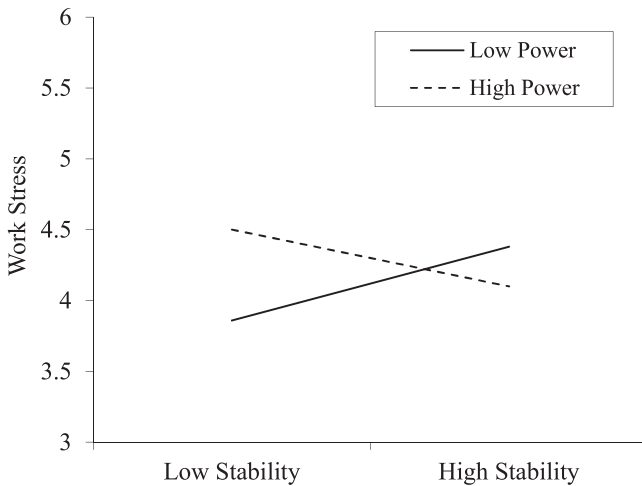


FIGURE 2. Two-way interaction of stability and power predicting work stress.

relationship among individuals with higher power ( $+1SD$ ;  $B = -.21$ ,  $SE = .12$ ,  $p = .075$ ) suggested that the relatively powerful experienced increased work stress when their position was unstable rather than stable. For lower-power individuals, on the other hand, a marginally significant positive simple slope ( $-1SD$ ;  $B = .25$ ,  $SE = .13$ ,  $p = .069$ ) suggested that the relatively powerless experienced decreased work stress when their position was unstable rather than stable.

Importantly, these two-way interactive relationships were qualified by three-way interactions between power, stability, and SDO for the subjective ( $B = -.17$ ,  $p = .033$ ), formal hierarchical ( $B = -.15$ ,  $p = .050$ ), and composite power ( $B = -.17$ ,  $p = .035$ ) measures; see Figure 3. Consistent with predictions, the interaction of power and stability with work stress was only significant among individuals higher in SDO ( $+1SD$ ;  $B = -.33$ ,  $SE = .11$ ,  $p = .003$ ; based on the composite power measure), but not among individuals lower in SDO ( $-1SD$ ;  $B = .01$ ,  $SE = .13$ ,  $p = .957$ ). Further analyses among participants with higher SDO revealed the expected negative simple slope for the stability–stress relationship among individuals with higher power ( $+1SD$ ;  $B = -.35$ ,  $SE = .17$ ,  $p = .040$ ), indicating that the relatively powerful experienced increased work stress when their position was unstable rather than stable. Among lower-power individuals, on the other hand, a marginally significant positive simple slope for the stability–stress relationship ( $-1SD$ ;  $B = .31$ ,  $SE = .16$ ,  $p = .056$ ) illustrated that the relatively powerless experienced decreased work stress when their position was unstable rather than stable.

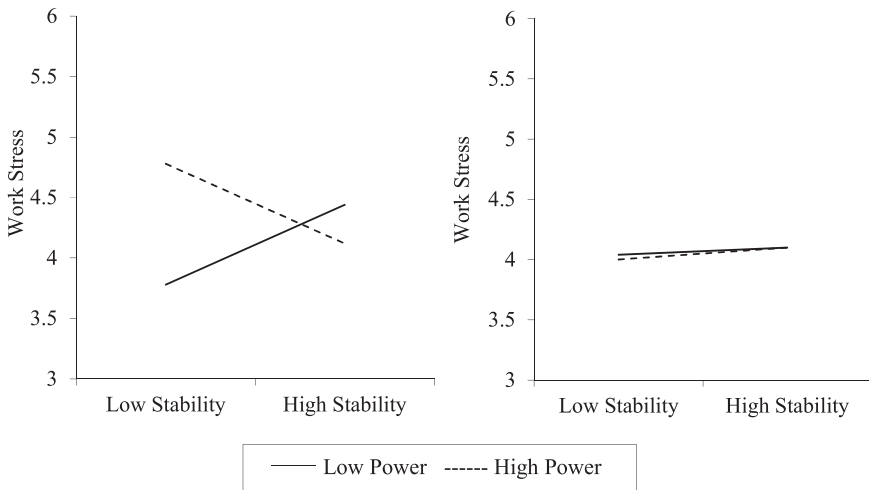


FIGURE 3. Three-way interaction of stability, power, and social dominance orientation predicting work stress.

## DISCUSSION

### Theoretical Implications

The present research examined the roles of power, stability, and SDO for individuals' work stress. Our findings make several contributions to the literature on power and its consequences for individuals' stress experiences. First, using two different measures of power, we demonstrated that power and stability interact to influence work stress. In doing so, the present research shows that the role of power and stability for physiological stress previously observed in laboratory settings (Jordan et al., 2011; Scheepers et al., 2015) similarly applies to individuals' subjective stress experiences in an organisational field setting. Hence, this study contributes to the development of a coherent body of evidence that illustrates that power is not universally stress-reducing or stress-inducing. Instead, these results highlight the role of positional stability as a key boundary condition for understanding power–stress linkages, showing the interactive effects of power and stability for stress across differing research methods and study contexts.

Second, our findings advance theory on power and stress by emphasising that the power–stress linkage may be more nuanced than previously believed, with both contextual factors (stability) *and* individual differences (SDO) shaping this association. As such, we add diversity to earlier theorising that has used a resource-based logic to explain power and stability's joint effects (Jordan et al., 2011; Sapolsky, 2005). This work has argued that high power is

particularly stressful when the power hierarchy is unstable, whereas low power is particularly stressful when the power hierarchy is stable. We provide initial evidence to qualify this notion by demonstrating that, in organisational settings, this may only be valid for individuals higher in SDO. As such, our findings suggest that research on power in organisations may require a broader conceptualisation of “resources” than ethological or experimental findings might indicate. Such resources may go beyond the mere fulfillment of primal needs (e.g. access to food, shelter, and mates) to also include social and psychological resources (e.g. autonomy, prestige, and status) whose salience may differ between individuals.

Third, our results demonstrate that among high-SDO individuals, teetering at the top (i.e. unstable high power) may elicit more stress than any other organisational situation (including both stable and unstable low power; see Figure 3). This pattern is consistent with conservation of resources theory (Hobfoll, 2001), which identifies (expected) resource losses as a primary source of stress. In accordance with conservation of resources theory’s first principle (i.e. the primacy of resource loss; Hobfoll, 2001), the present findings support the notion that anticipating an impending loss of power may be more stressful than the prospect of remaining in a low-power position.

Finally, the present research corroborates and extends earlier findings by investigating the interactive roles of power and stability in a Chinese context. Until now, the relationship between power and stress has exclusively been examined in Western samples (Jordan et al., 2011; Scheepers et al., 2015; Schmid & Schmid Mast, 2013; Sherman et al., 2012). Together with this previous work, the current research suggests that the effects of power and stability for stress may similarly apply across diverse cultures—despite marked differences in power-relevant values between China and many Western countries (e.g. in terms of power distance [Hofstede, 1980] and deference toward authority [Javidan, Dorfman, De Luque, & House, 2006]).

## Practical Implications

From a practical perspective, our results present an interesting dilemma when trying to reduce work stress in organisations. Whereas persons in high-power positions may benefit from a situation in which their power is stable and secure, low-power individuals are likely to suffer in such situations. Hence, policies that alter the stability of an organisation’s power hierarchy to ameliorate stress experiences among one group (i.e. relatively powerful members of the organisation) may, at the same time, risk alienating another group (i.e. relatively powerless members). Importantly, the present findings also point toward a potential solution to this dilemma. That is, organisations could emphasise career paths that offer alternatives to classic upward mobility, such as lateral moves (Chudzikowski, 2012). Such career policies can create advancement possibilities and,

thus, increase perceptions of power instability among lower-power individuals, without destabilising those in higher-power positions. Horizontal, cross-functional, or geographically diverse career trajectories that present unique challenges, experiences, and growth opportunities may be important elements in this regard (Peiperl & Baruch, 1997).

## Limitations and Future Research

We acknowledge that the present research is not without limitations. In particular, the cross-sectional, single-source nature of our data is a potential source of concern, preventing causal inference and raising the possibility of common method bias (Podsakoff et al., 2003). At the same time, our two-way interaction results are consistent with Jordan and colleagues' (2011) experimental findings, attenuating concerns about the plausibility of the assumed causal relations. Moreover, common method variance is unlikely to account for the interactive pattern of relationships we have obtained, as it is virtually impossible to observe such moderated relations in the presence of common method bias (Evans, 1985; Siemsen, Roth, & Oliveira, 2010). In addition, in designing the study questionnaires, we followed several recommendations by Podsakoff and colleagues (2003) to further reduce possible common method concerns. First, as noted before, we separated the work stress measure from the other constructs through several unrelated items to reduce artificial inflation of the respective relationships. Second, our survey used widely differing response formats for the power measures (i.e. a 0–100 slider instrument and a 3-point scale), compared to the other constructs' measures (i.e. 6-point Likert scales) to achieve further "methodological separation" (Podsakoff et al., 2003, p. 887). And third, we assured participants of the anonymity and confidentiality of their responses and emphasised that there were no right or wrong answers. Consequently, we note that all of the bivariate correlations between distinct constructs (as presented in Table 1) are small to moderate in magnitude, rendering inflation through common method issues unlikely. Nevertheless, although our subjective operationalisation of stress taps into an important and meaningful aspect of individuals' work experience, future research may supplement self-report measures of work stress with physiological indicators, such as cardiovascular functioning (Jordan et al., 2011; Scheepers et al., 2015) or cortisol levels (Mehta et al., 2008; Mehta & Josephs, 2010) to create additional confidence in our findings. Furthermore, although similar to previous studies investigating three-way interactions (e.g. Emans, Munduate, Klaver, & Van de Vliert, 2003; George & Zhou, 2002, 2007), we note that our sample size was somewhat small for examining this complex pattern of relationships. Hence, future research using larger samples may further enhance our findings' generalisability and robustness.



Beyond addressing such limitations, future research could expand the present model by examining other potential moderators of the relationship between power, stability, and stress. In addition to SDO, for example, pre-existing physiological states, such as testosterone levels (Mehta et al., 2008; Vongas & Al Hajj, 2015), could moderate these interactive effects, with high testosterone exacerbating and low testosterone attenuating the pattern witnessed in the current study. Prior research on humans and non-human primates, accordingly, has linked testosterone to increased dominance (Borowski, Malinowska, & Książek, 2014; Mehta & Josephs, 2010; Ostner, Heistermann, & Schülke, 2008). Examining such biological markers in power–stress linkages may advance a more fundamental understanding of power’s role for individuals’ stress experiences.

Finally, future studies could examine the down-stream consequences of the power–stability–SDO relation with work stress in organisational settings. Through their interactive effects on work stress, for example, power, stability, and SDO might influence managers’ leadership behaviors. Prior research has shown that managers whose dominant positions were threatened (i.e. unstable high power) acted in such a way as to protect their high-power positions (Mead & Maner, 2012; Williams, 2014). Combining this evidence with the present findings, one might expect that these consequences are particularly pronounced among managers higher in SDO. These managers may try to secure their unstable high power by, for example, avoiding participative power-sharing behaviors (Ahearne, Mathieu, & Rapp, 2005; Amundsen & Martinsen, 2014), prioritising their own interests over organisational objectives (Maner & Mead, 2010), or undermining their subordinates’ goal attainment (Duffy, Ganster, & Pagon, 2002; Georgesen & Harris, 2006). Higher SDO managers placed in stable low-power positions, on the other hand, might be particularly prone to excessive risk-taking or coercive power tactics to improve their precarious situation (Goodstadt & Hjelle, 1973; Jordan et al., 2011).

## REFERENCES

- Ahearne, M., Mathieu, J., & Rapp, A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied Psychology, 90*(5), 945–955. <https://doi.org/10.1037/0021-9010.90.5.945>
- Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: SAGE Publications.
- Altemeyer, B. (1998). The other “Authoritarian Personality”. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 47–91). San Diego, CA: Academic Press.
- Amundsen, S., & Martinsen, Ø.L. (2014). Self–other agreement in empowering leadership: Relationships with leader effectiveness and subordinates’ job satisfaction

- and turnover intention. *Leadership Quarterly*, 25(4), 784–800. <https://doi.org/10.1016/j.leaqua.2014.04.007>
- Anderson, C., & Brion, S. (2014). Perspectives on power in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 67–97. <https://doi.org/10.1146/annurev-orgpsych-031413-091259>
- Asendorpf, J.B., Conner, M., De Fruyt, F., De Houwer, J., Denissen, J.J., Fiedler, K., ... & Nosek, B.A. (2013). Recommendations for increasing replicability in psychology. *European Journal of Personality*, 27(2), 108–119.
- Barnes-Farrell, J.L., Rumery, S.M., & Swody, C.A. (2002). How do concepts of age relate to work and off-the-job stresses and strains? A field study of health care workers in five nations. *Experimental Aging Research*, 28(1), 87–98. <https://doi.org/10.1080/036107302753365577>
- Barnett, S.A. (1955). Competition among wild rats. *Nature*, 175(4446), 126–127. <https://doi.org/10.1038/175126b0>
- Becker, T.E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8(3), 274–289. <https://doi.org/10.1177/1094428105278021>
- Blanchard, D.C., Spencer, R.L., Weiss, S.M., Blanchard, R.J., McEwen, B., & Sakai, R.R. (1995). Visible burrow system as a model of chronic social stress: Behavioral and neuroendocrine correlates. *Psychoneuroendocrinology*, 20(2), 117–134. [https://doi.org/10.1016/0306-4530\(94\)E0045-B](https://doi.org/10.1016/0306-4530(94)E0045-B)
- Borowski, Z., Malinowska, A., & Książek, A. (2014). Relationships between dominance, testosterone level and scent marking of males in a free-living root vole (*Microtus oeconomus*) population. *Physiology & Behavior*, 128, 26–31. <https://doi.org/10.1016/j.physbeh.2014.01.032>
- Bradley, G. (2007). Job tenure as a moderator of stressor–strain relations: A comparison of experienced and new-start teachers. *Work & Stress*, 21(1), 48–64. <https://doi.org/10.1080/02678370701264685>
- Chiang, F.F.T., Birtch, T.A., & Kwan, H.K. (2010). The moderating roles of job control and work–life balance practices on employee stress in the hotel and catering industry. *International Journal of Hospitality Management*, 29(1), 25–32. <https://doi.org/10.1016/j.ijhm.2009.04.005>
- Chudzikowski, K. (2012). Career transitions and career success in the “new” career era. *Journal of Vocational Behavior*, 81(2), 298–306. <https://doi.org/10.1016/j.jvb.2011.10.005>
- Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98–104. <https://doi.org/10.1037/0021-9010.78.1.98>
- Creel, S., Marushacree, N., & Monfort, S.L. (1996). Social stress and dominance. *Nature*, 379(6562), 212–212. <https://doi.org/10.1038/379212a0>
- De Cremer, D., Cornelis, I., & Van Hiel, A. (2008). To whom does voice in groups matter? Effects of voice on affect and procedural fairness judgments as a function of social dominance orientation. *Journal of Social Psychology*, 148(1), 61–76. <https://doi.org/10.3200/SOCP.148.1.61-76>
- Dewsbury, D.A. (1982). Dominance rank, copulatory behavior, and differential reproduction. *Quarterly Review of Biology*, 57(2), 135–159.

- Dimsdale, J.E. (2008). Psychological stress and cardiovascular disease. *Journal of the American College of Cardiology*, *51*(13), 1237–1246. <https://doi.org/10.1016/j.jacc.2007.12.024>
- Dubinsky, A.J., Yammarino, F.J., Jolson, M.A., & Spangler, W.D. (1995). Transformational leadership: An initial investigation in sales management. *Journal of Personal Selling and Sales Management*, *15*(2), 17–31.
- Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 33, pp. 41–113). San Diego, CA: Academic Press.
- Duckitt, J. (2006). Differential effects of right wing authoritarianism and social dominance orientation on outgroup attitudes and their mediation by threat from and competitiveness to outgroups. *Personality and Social Psychology Bulletin*, *32*(5), 684–696. <https://doi.org/10.1177/0146167205284282>
- Duffy, M.K., Ganster, D., & Pagon, M. (2002). Social undermining in the workplace. *Academy of Management Journal*, *45*(2), 331–351. <https://doi.org/10.2307/3069350>
- Duriez, B., & Van Hiel, A. (2002). The march of modern fascism: A comparison of social dominance orientation and authoritarianism. *Personality and Individual Differences*, *32*(7), 1199–1213. [https://doi.org/10.1016/S0191-8869\(01\)00086-1](https://doi.org/10.1016/S0191-8869(01)00086-1)
- Eden, D. (2002). From the editors. *Academy of Management Journal*, *45*(5), 841–846.
- Ellis, L. (1995). Dominance and reproductive success among nonhuman animals: A cross-species comparison. *Ethology and Sociobiology*, *16*(4), 257–333. [https://doi.org/10.1016/0162-3095\(95\)00050-U](https://doi.org/10.1016/0162-3095(95)00050-U)
- Emans, B.J.M., Munduate, L., Klaver, E., & Van de Vliert, E. (2003). Constructive consequences of leaders' forcing influence styles. *Applied Psychology: An International Review*, *52*(1), 36–54. <https://doi.org/10.1111/1464-0597.00122>
- Evans, M.G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes*, *36*(3), 305–323. [https://doi.org/10.1016/0749-5978\(85\)90002-0](https://doi.org/10.1016/0749-5978(85)90002-0)
- Eysenck, H.J. (1988). Personality, stress and cancer: Prediction and prophylaxis. *British Journal of Medical Psychology*, *61*(1), 57–75. <https://doi.org/10.1111/j.2044-8341.1988.tb02765.x>
- Fast, N.J., Gruenfeld, D.H., Sivanathan, N., & Galinsky, A.D. (2009). Illusory control: A generative force behind power's far-reaching effects. *Psychological Science*, *20*(4), 502–508. <https://doi.org/10.1111/j.1467-9280.2009.02311.x>
- Flynn, F.J., Gruenfeld, D., Molm, L.D., & Polzer, J.T. (2011). Social psychological perspectives on power in organizations. *Administrative Science Quarterly*, *56*(4), 495–500. <https://doi.org/10.1177/0001839212440969>
- George, J.M., & Zhou, J. (2002). Understanding when bad moods foster creativity and good ones don't: The role of context and clarity of feelings. *Journal of Applied Psychology*, *87*(4), 687–697.
- George, J.M., & Zhou, J. (2007). Dual tuning in a supportive context: Joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *Academy of Management Journal*, *50*(3), 605–622. <https://doi.org/10.5465/AMJ.2007.25525934>

- Georgesesen, J.C., & Harris, M.J. (2006). Holding onto power: Effects of power-holders' positional instability and expectancies on interactions with subordinates. *European Journal of Social Psychology, 36*(4), 451–468. <https://doi.org/10.1002/ejsp.352>
- Goodstadt, B.E., & Hjelle, L.A. (1973). Power to the powerless: Locus of control and the use of power. *Journal of Personality and Social Psychology, 27*(2), 190–196.
- Gosling, S.D. (2001). From mice to men: What can we learn about personality from animal research? *Psychological Bulletin, 127*(1), 45–86. <https://doi.org/10.1037//0033-2909.127.1.45>
- Harlow, H.F., Gluck, J.P., & Suomi, S.J. (1972). Generalization of behavioral data between nonhuman and human animals. *American Psychologist, 27*(8), 709–716. <https://doi.org/10.1037/h0033109>
- Hellhammer, D.H., Buchtal, J., Gutberlet, I., & Kirschbaum, C. (1997). Social hierarchy and adrenocortical stress reactivity in men. *Psychoneuroendocrinology, 22*(8), 643–650.
- Hobfoll, S.E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513–524.
- Hobfoll, S.E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review, 50*(3), 337–421. <https://doi.org/10.1111/1464-0597.00062>
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Jasny, B.R., Chin, G., Chong, L., & Vignieri, S. (2011). Again, and again, and again. . . *Science, 334*(6060), 1225–1225.
- Javidan, M., Dorfman, P.W., De Luque, M.S., & House, R.J. (2006). In the eye of the beholder: Cross cultural lessons in leadership from project GLOBE. *Academy of Management Perspectives, 20*(1), 67–90. <https://doi.org/10.5465/AMP.2006.19873410>
- Jordan, J., Sivanathan, N., & Galinsky, A.D. (2011). Something to lose and nothing to gain: The role of stress in the interactive effect of power and stability on risk taking. *Administrative Science Quarterly, 56*(4), 530–558. <https://doi.org/10.1177/0001839212441928>
- Jost, J.T., & Burgess, D. (2000). Attitudinal ambivalence and the conflict between group and system justification motives in low status groups. *Personality and Social Psychology Bulletin, 26*(3), 293–305.
- Kaplan, J.R., Manuck, S.B., Clarkson, T.B., Lusso, F.M., & Taub, D.M. (1982). Social status, environment, and atherosclerosis in cynomolgus monkeys. *Arteriosclerosis (Dallas, Tex.), 2*(5), 359–368.
- Keltner, D., Gruenfeld, D.H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*(2), 265–284.
- Knight, E.L., & Mehta, P.H. (2017). Hierarchy stability moderates the effect of status on stress and performance in humans. *Proceedings of the National Academy of Sciences, USA, 114*(1), 78–83. <https://doi.org/10.1073/pnas.1609811114>
- Lammers, J., & Imhoff, R. (2016). Power and sadomasochism: Understanding the antecedents of a knotty relationship. *Social Psychological and Personality Science, 7*(2), 142–148. <https://doi.org/10.1177/1948550615604452>

- Lammers, J., Stoker, J.I., Jordan, J., Pollmann, M., & Stapel, D.A. (2011). Power increases infidelity among men and women. *Psychological Science*, 22(9), 1191–1197. <https://doi.org/10.1177/0956797611416252>
- Lammers, J., Stoker, J.I., & Stapel, D.A. (2010). Power and behavioral approach orientation in existing power relations and the mediating effect of income. *European Journal of Social Psychology*, 40(3), 543–551. <https://doi.org/10.1002/ejsp.702>
- Lee, R.T., & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123–133. <https://doi.org/10.1037/0021-9010.81.2.123>
- Magee, J.C., & Galinsky, A.D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *Academy of Management Annals*, 2(1), 351–398. <https://doi.org/10.1080/19416520802211628>
- Maner, J.K., Gailliot, M.T., Butz, D.A., & Peruche, B.M. (2007). Power, risk, and the status quo: Does power promote riskier or more conservative decision making? *Personality & Social Psychology Bulletin*, 33(4), 451–462. <https://doi.org/10.1177/0146167206297405>
- Maner, J.K., & Mead, N.L. (2010). The essential tension between leadership and power: When leaders sacrifice group goals for the sake of self-interest. *Journal of Personality and Social Psychology*, 99(3), 482–497. <https://doi.org/10.1037/a0018559>
- Manuck, S.B., Marsland, A.L., Kaplan, J.R., & Williams, J.K. (1995). The pathogenicity of behavior and its neuroendocrine mediation: An example from coronary artery disease. *Psychosomatic Medicine*, 57(3), 275–283. <https://doi.org/10.1097/00006842-199505000-00009>
- Mead, N.L., & Maner, J.K. (2012). On keeping your enemies close: Powerful leaders seek proximity to ingroup power threats. *Journal of Personality and Social Psychology*, 102(3), 576–591. <https://doi.org/10.1037/a0025755>
- Mehta, P.H., Jones, A.C., & Josephs, R.A. (2008). The social endocrinology of dominance: Basal testosterone predicts cortisol changes and behavior following victory and defeat. *Journal of Personality and Social Psychology*, 94(6), 1078–1093. <https://doi.org/10.1037/0022-3514.94.6.1078>
- Mehta, P.H., & Josephs, R.A. (2010). Testosterone and cortisol jointly regulate dominance: Evidence for a dual-hormone hypothesis. *Hormones and Behavior*, 58(5), 898–906. <https://doi.org/10.1016/j.yhbeh.2010.08.020>
- Motowidlo, S.J., Packard, J.S., & Manning, M.R. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology*, 71(4), 618–629. <https://doi.org/10.1037/0021-9010.71.4.618>
- Ostner, J., Heistermann, M., & Schülke, O. (2008). Dominance, aggression and physiological stress in wild male Assamese macaques (*Macaca assamensis*). *Hormones and Behavior*, 54(5), 613–619. <https://doi.org/10.1016/j.yhbeh.2008.05.020>
- Overbeck, J.R., Jost, J.T., Mosso, C.O., & Flizik, A. (2004). Resistant versus acquiescent responses to ingroup inferiority as a function of social dominance orientation in the USA and Italy. *Group Processes & Intergroup Relations*, 7(1), 35–54.
- Peiperl, M., & Baruch, Y. (1997). Back to square zero: The post-corporate career. *Organizational Dynamics*, 25(4), 7–22. [https://doi.org/10.1016/S0090-2616\(97\)90033-4](https://doi.org/10.1016/S0090-2616(97)90033-4)

- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Pratto, F., Sidanius, J., Stallworth, L.M., & Malle, B.F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67(4), 741–763. <https://doi.org/10.1037/0022-3514.67.4.741>
- Pratto, F., Stallworth, L.M., Sidanius, J., & Siers, B. (1997). The gender gap in occupational role attainment: A social dominance approach. *Journal of Personality and Social Psychology*, 72(1), 37–53.
- Rauschenbach, C., Krumm, S., Thielgen, M., & Hertel, G. (2013). Age and work-related stress: A review and meta-analysis. *Journal of Managerial Psychology*, 28(7/8), 781–804. <https://doi.org/10.1108/JMP-07-2013-0251>
- Sapolsky, R.M. (1993). The physiology of dominance in stable and non-stable social hierarchies. In W. Mason & S. Mendoza (Eds.), *Primate social conflict* (pp. 171–183). New York: SUNY Press.
- Sapolsky, R.M. (1995). Social subordination as a marker of hypercortisolism: Some unexpected subtleties. *Annals of the New York Academy of Sciences*, 771, 626–639. <https://doi.org/10.1111/j.1749-6632.1995.tb44715.x>
- Sapolsky, R.M. (2005). The influence of social hierarchy on primate health. *Science*, 308(5722), 648–652. <https://doi.org/10.1126/science.1106477>
- Sapolsky, R.M., & Share, L.J. (1994). Rank-related differences in cardiovascular function among wild baboons: Role of sensitivity to glucocorticoids. *American Journal of Primatology*, 32(4), 261–275. <https://doi.org/10.1002/ajp.1350320404>
- Sapolsky, R.M., & Share, L.J. (2004). A pacific culture among wild baboons: Its emergence and transmission. *PLoS Biology*, 2(4), e106. <https://doi.org/10.1371/journal.pbio.0020106>
- Scheepers, D. (2009). Turning social identity threat into challenge: Status stability and cardiovascular reactivity during inter-group competition. *Journal of Experimental Social Psychology*, 45(1), 228–233. <https://doi.org/10.1016/j.jesp.2008.09.011>
- Scheepers, D., & Ellemers, N. (2005). When the pressure is up: The assessment of social identity threat in low and high status groups. *Journal of Experimental Social Psychology*, 41(2), 192–200. <https://doi.org/10.1016/j.jesp.2004.06.002>
- Scheepers, D., Röell, C., & Ellemers, N. (2015). Unstable power threatens the powerful and challenges the powerless: Evidence from cardiovascular markers of motivation. *Frontiers in Psychology*, 6, 720. <https://doi.org/10.3389/fpsyg.2015.00720>
- Schmid, P.C., & Schmid Mast, M. (2013). Power increases performance in a social evaluation situation as a result of decreased stress responses. *European Journal of Social Psychology*, 43(3), 201–211. <https://doi.org/10.1002/ejsp.1937>
- Sherman, G.D., Lee, J.J., Cuddy, A.J.C., Renshon, J., Oveis, C., Gross, J.J., & Lerner, J.S. (2012). Leadership is associated with lower levels of stress. *Proceedings of the National Academy of Sciences, USA*, 109(44), 17903–17907. <https://doi.org/10.1073/pnas.1207042109>
- Sidanius, J., Levin, S., Federico, C.M., & Pratto, F. (2001). Legitimizing ideologies: The social dominance approach. In J.T. Jost & B. Major (Eds.), *The psychology of*



- legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 307–331). Cambridge: Cambridge University Press.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression* (1st edn.). Cambridge and New York: Cambridge University Press.
- Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods, 13*(3), 456–476. <https://doi.org/10.1177/1094428109351241>
- Son Hing, L.S., Bobocel, D.R., Zanna, M.P., & McBride, M.V. (2007). Authoritarian dynamics and unethical decision making: High social dominance orientation leaders and high right-wing authoritarianism followers. *Journal of Personality and Social Psychology, 92*(1), 67–81. <https://doi.org/10.1037/0022-3514.92.1.67>
- Steptoe, A., & Kivimäki, M. (2012). Stress and cardiovascular disease. *Nature Reviews Cardiology, 9*(6), 360–370. <https://doi.org/10.1038/nrcardio.2012.45>
- Tajfel, H., & Turner, J.C. (1979). An integrative theory of intergroup conflict. In W.G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks-Cole.
- Tajfel, H., & Turner, J.C. (1986). The social identity theory of inter-group behavior. In S. Worchel & W.G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson-Hall.
- Vongas, J.G., & Al Hajj, R. (2015). Competing sexes, power, and testosterone: How winning and losing affect people's empathic responses and what this means for organisations. *Applied Psychology: An International Review, 64*(2), 308–337. <https://doi.org/10.1111/apps.12030>
- Watson, S.B., Goh, Y.W., & Sawang, S. (2011). Gender influences on the work-related stress-coping process. *Journal of Individual Differences, 32*(1), 39–46. <https://doi.org/10.1027/1614-0001/a000033>
- Westphal, J.D., & Zajac, E.J. (1995). Who shall govern? CEO/board power, demographic similarity, and new director selection. *Administrative Science Quarterly, 40*(1), 60–83.
- Williams, M.J. (2014). Serving the self from the seat of power: Goals and threats predict leaders' self-interested behavior. *Journal of Management, 40*(5), 1365–1395. <https://doi.org/10.1177/0149206314525203>