How others light the creative spark

Low power accentuates the benefits of diversity for individual inspiration and creativity

Hoever, I.J.; Betancourt, N.E.; Chen, G.; Zhou, J.

DOI
10.1016/j.obhdp.2023.104248

Publication date
2023

Document Version
Final published version

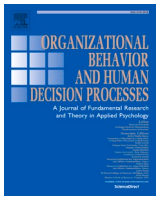
Published in
Organizational Behavior and Human Decision Processes

Organizational Behavior and Human Decision Processes 176 (2023) 104248

Contents lists available at ScienceDirect

Organizational Behavior and Human Decision Processes

journal homepage: www.elsevier.com/locate/obhdp



How others light the creative spark: Low power accentuates the benefits of diversity for individual inspiration and creativity

Inga J. Hoever [a,*], Nathan E. Betancourt [b], Guoquan Chen [c], Jing Zhou [d]

[a] Rotterdam School of Management, Erasmus University Rotterdam, the Netherlands
[b] Amsterdam Business School, University of Amsterdam, the Netherlands
[c] School of Economics and Management, Tsinghua University, China
[d] Jesse Jones Graduate School of Business, Rice University, United States of America

ARTICLE INFO

Keywords:
Employee creativity
Inspiration
Power
Diversity

ABSTRACT

Power has been shown to liberate actors from situational influences that harm creativity because they elicit conformity. However, the workplace creativity literature recognizes that situational factors can also promote creativity. In this paper, we combine these findings and investigate whether this means that low-power actors benefit more from creativity-enhancing situational factors. Specifically, we test how power attenuates the impact of diversity in an actor's environment on individual inspiration and creativity. Data from two large survey studies and one archival study provide converging evidence for the proposed contingent benefits of diversity for low-power actors' inspiration and creativity. Together, the results of these studies demonstrate that low power may render individuals more receptive to social influences conducive to creativity, such as diversity, thereby facilitating individuals' feelings of inspiration and displayed creativity.

1. Introduction

Because the novel and useful ideas for products, services, and procedures that constitute workplace creativity rarely originate in a single person's mind, contemporary creativity research views creativity as an inherently social phenomenon (Amabile, 1996; Shalley et al., 2004) with creative actors embedded in social and organizational contexts (Amabile et al., 1996). Prior research has shown that individuals' power, whether it is experience or position of power (Bombari et al., 2017; Galinsky, Rucker, et al., 2015) in this social context substantially influences their behaviors and obtained outcomes (Anderson & Brion, 2014; Magee & Galinsky, 2008). Research conducted in the behavioral laboratory suggests that creativity is no exception to this, with studies showing a positive effect of power on creativity (Duguid & Goncalo, 2015, Study 4), particularly when situations demand it (Gervais et al., 2013, Study 1). Typically, this creative advantage of the powerful is attributed to their relative immunity to conformity-inducing situational influences (Galinsky et al., 2008, Studies 1, 2).

Notwithstanding the importance of these insights about power liberating actors from creativity-inhibiting influences, it is important to note that this work is based on a premise that may not fully reflect the experience of actors engaged in workplace creativity. Specifically, prior work on power's role for creativity primarily conceives of situational influences as harmful for creativity (e.g., examples that prime common solutions; Galinsky et al., 2008). Yet research on the social side of workplace creativity identifies both creativity-inhibiting and -enhancing influences (Perry-Smith & Shalley, 2003; van Knippenberg & Hirst, 2020; Woodman et al., 1993). This raises two interesting questions: Given that the advantage of the powerful stems from their immunity to creativity-*constraining* situational influences, do low-power actors exhibit greater benefits from creativity-*promoting* situational influences? And if so, through which mechanisms can situational influences benefit the creativity of low-power actors?

We pursue these questions by studying whether in ongoing interactive contexts, the experience of diversity promotes creativity and its precursor inspiration more strongly for low- than high-power individuals. Diversity, defined as "differences between individuals on any attribute that may lead to the perception that another person is different" (van Knippenberg et al., 2004, p. 1008) has long been seen as conducive to creativity. Though research finds that it tends to interact with other factors to fosters creativity (van Knippenberg & Hoever, 2017; van Knippenberg & Hoever, 2021), diversity's core value is that it affords actors with different ideas and perspectives on problems and solutions (Perry-Smith, 2014; Richter et al., 2012; Shin et al., 2012; van

* Corresponding author at: Rotterdam School of Management, Erasmus University Rotterdam, Burgemeester Oudlaan 50, 3062 PA Rotterdam, the Netherlands.
E-mail address: ihoever@rsm.nl (I.J. Hoever).

https://doi.org/10.1016/j.obhdp.2023.104248
Received 2 April 2020; Received in revised form 5 March 2023; Accepted 4 April 2023
Available online 11 May 2023

Knippenberg, 2017). Because a broad range of diversity attributes can provide different information and perspectives, research has stressed that an attribute's task-relevance and salience to an actor varies across contexts (van Knippenberg et al., 2004; van Knippenberg et al., 2013). As such, rather than focusing on one diversity attribute or claiming that our theory holds for all attributes across all contexts, our studies focus on different diversity attributes which have been shown to entail differences in knowledge, skills, and perspectives that are relevant to a specific task and salient to actors in their context. In contrast to the constraining situational influences that signal a single dominant approach to a task, diversity attributes that fit these criteria are potentially creativity-enhancing situational influences because they entail a variety of ways to view and address tasks. Indeed, diversity has been found to reduce conformity (Gaither et al., 2018; Levine et al., 2014).

We argue that the variety and plurality inherent in diversity can evoke novel insights among actors who experience it (Paulus et al., 2002). This, in turn, can elicit inspiration, defined as a psychological state that arises when individuals – triggered by an external or unconscious stimulus – experience an illuminating insight which transcends the ordinary or mundane and thus energizes the expression of the insight into actions (Thrash, Maruskin, et al., 2010; Thrash & Elliot, 2003, 2004). As such, inspiration represents a potent avenue through which situational factors like diversity can promote creativity because it accounts for the link between an evoked awareness of new and superior ideas into actors' motivation to realize them through the intrinsic value that the inspiring stimulus represents (Thrash, 2020; Thrash et al., 2014).

Yet critically, diversity does not always evoke novel insights and not all insights inspire (Cui et al., 2020). Prior research shows that diversity leads actors to generate novel insights when they attend to and process others' input (Brown et al., 1998; Dugosh et al., 2000). And research on inspiration stresses that to inspire, insights need to be quasi-passively evoked and deemed worthy and meaningful (Oleynick et al., 2014; Thrash et al., 2014). We propose that the experience of power – or of the perceived degree of control over others in a social setting (Anderson et al., 2012; Bombari et al., 2017) – serves as a key contingency.

In light of power's established effects on cognition (Goodwin et al., 2000), agency (Obhi et al., 2012), social and self-perception (Wojciszke & Struzynska-Kujalowicz, 2007), and susceptibility to influence (Galinsky et al., 2008; Obhi et al., 2012; See et al., 2011; Tost et al., 2012, see Galinsky, Rucker, et al., 2015 for a review), we argue that low- and high-power actors are differentially likely to derive insights from diversity and to experience them as inspirational. Hence, and in line with the finding that power reduces the impact of situational influences on actors (Galinsky et al., 2008; Schaerer et al., 2018), we argue that low-power actors will be more likely to experience inspiration in a diverse work environment than high-power actors.

We tested our hypotheses (see Fig. 1 for a model overview) about diversity's relationship with individual inspiration and creativity across three studies: A sample of students in project teams focusing on the role of nationality diversity (Study 1), a multi-source field study testing the role of perceived cognitive diversity of coworkers (Study 2), and archival data on scientists in the Manhattan Project (MP) focusing on educational background diversity (Study 3). Given work suggesting that the effects of more decontextualized, experienced power may differ from socially embedded, structural power (Tost, 2015; Tost & Johnson, 2019), we focus on power in ongoing interactive contexts. Our findings support the notion that those who feel (Studies 1 & 2) or hold low power (Study 3) are more receptive to the creativity-enhancing influence of diversity.

Our studies offer important contributions to the literature. First, our results challenge and extend the received wisdom that the relative immunity to situational influences of high-power actors represents a uniform creative advantage (Galinsky et al., 2008). By studying creativity in ongoing interactive contexts and drawing on the workplace creativity literature, we show that diversity more strongly relates to inspiration and in turn creativity for low-power actors. Second, by redirecting our focus from creativity-constraining to creativity-enhancing influences, we draw attention to inspiration as a mechanism that transmits this situational influence into individual creativity (Thrash et al., 2014). Inspiration is often hailed as vital for creativity but has so far received little attention in the workplace creativity literature. Our work shows that given its focus on how insights are passively received from sources outside of individuals' conscious mind (Thrash & Elliot, 2003, 2004), inspiration may be an interesting mechanism to consider for how creativity emerges for those experiencing low agency. Our study of inspiration thus complements the typically more goal-directed and self-referential emergent states and processes like intrinsic motivation, creative self-efficacy, and information elaboration which current research finds to be potent antecedents of creativity (Liu et al., 2016; van Knippenberg & Hoever, 2021). Finally, our work points to the value of further exploring power's role for workplace creativity – a literature in which power has so far played a limited role. This is striking as one dominant meta-framework on workplace creativity focuses on person-situation interactions (van Knippenberg & Hirst, 2020; Woodman et al., 1993; Zhou & Hoever, 2014). Given power's impact on the interplay between person and situation (Blader & Chen, 2012; Galinsky et al., 2008) and the ubiquity of hierarchical differentiation in organizations (Magee & Galinsky, 2008), power is likely to play a critical role in shaping the nature of these interactions.

2. Theory and hypotheses

2.1. The contingent benefits of diversity for inspiration

When looking at the interplay of power and creativity, prior work has primarily cast power as an advantage due to its insulating role against situational influences that harm creativity by eliciting responses that

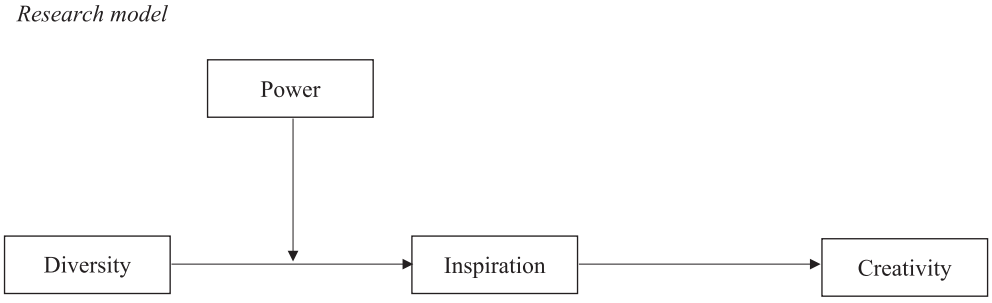


Fig. 1. Research model, *Note.* The variable of diversity refers to nationality diversity in Study 1, perceived cognitive diversity in Study 2, and educational background diversity in Study 3. Power is captured as sense of power in Studies 1 & 2 and position power in Study 3. Study 3 does not test the mediating role of inspiration.

conform to salient norms or dominant examples (Duguid & Goncalo, 2015; Galinsky et al., 2008). Building on the insight that situational factors can also enable creativity (Amabile, 1996; Goncalo & Duguid, 2012; Woodman et al., 1993), we study whether diversity can act as a signal of plurality and variety and hence stimulate the inverse response of inspiring new and better ideas, in particular for those in low power. Our core proposition is that diversity elicits inspiration but that these benefits are primarily experienced by low-power actors.

Diversity within one's social context (Perry-Smith & Shalley, 2003; van Knippenberg, 2017) has long been argued to offer potential benefits for creativity. Though typically contingent on other factors (Guillaume et al., 2017; van Knippenberg et al., 2004), the main source of these potential benefits lies in the fact that it exposes actors to a variety of information and viewpoints (van Knippenberg, 2017). Indeed, most diversity attributes come with differences in experiences and insights that can entail diverse perspectives, knowledge, and skills. Yet whether they are relevant for a task and perceived as such by an actor depends on the context (van Knippenberg et al., 2004; van Knippenberg et al., 2013). Recent meta-analytical work suggests that, on average, demographic characteristics such as nationality (the attribute we focus on in Study 1) and so called "job-related" diversity attributes like educational background (our focus in Study 3) both have net zero effects on team performance (van Dijk et al., 2012) although for each attribute, individual studies have shown benefits within specific contexts and under certain conditions (Dahlin et al., 2005; Kearney & Gebert, 2009; Shin & Zhou, 2007). Hence, we do not build attribute-specific, decontextualized theory but rather theoretically limit the range of attributes for which we predict potential gains in inspiration to attributes that a) proxy differences in viewpoints, knowledge, and skills, b) are relevant for the task at hand, and c) are likely to be salient to the actors in a given context (van Dijk et al., 2012; van Knippenberg et al., 2004). We revisit these theoretically informed criteria when outlining the selection of diversity measures in each study.

When meeting these criteria, diversity represents a situational influence that may trigger an inspiring insight. Support for this proposition comes from the brainstorming literature which recognizes diversity as a potential source of cognitive stimulation (Paulus et al., 2002), suggesting that exposure to a wider range of ideas leads individuals to generate more varied ideas (Nijstad et al., 2002). More broadly speaking, personal experiences of diversity have been argued to inspire creativity (Galinsky, Todd, et al., 2015; Hellmanzik, 2013).

Despite diversity's potential to elicit new insights, research suggests that diversity alone does not guarantee this elicitation nor that having an insight by itself reliably triggers inspiration. Regarding the former, prior work finds that cognitive stimulation from diversity is contingent on the perceiver's careful attention and processing (Brown et al., 1998; Dugosh et al., 2000; Paulus et al., 2002). Regarding the latter, research has differentiated inspiration from insight (Cui et al., 2020) such that insights capture the "cognitive content that enters consciousness suddenly" (Oleynick et al., 2014, p. 4) whereas inspiration also focuses on the motivational response that can emerge from this insight if it is seen as worthy, experienced as evocative and passively received, and hence triggers a mimetic psychological propensity to express and actualize the insight through creative behaviors (Oleynick et al., 2014; Thrash et al., 2014). We argue that the experience of power can shape both the extent to which diversity elicits insights and the extent to which insights are perceived to be inspirational – hence unleashing their motivational potential.

We focus on felt or perceived power as the amount of control an actor feels they have over others in a social situation (Anderson et al., 2012; Bombari et al., 2017). Though distinct from the actual asymmetric control over resources that is core to position power, both constructs share a focus on control in social relations and prior work suggests that the experience of power covaries with and accounts for the effects of position power (see Galinsky, Rucker, et al., 2015; Magee & Galinsky, 2008). Going forward, we hence use the broader labels of low and high power but distinguish these types of power when describing prior findings.

There are several indicators that low-power actors attend more to their social surroundings thus creating the attentional focus and effort that prior work identifies as important for diversity to elicit an insight (Brown et al., 1998; Dugosh et al., 2000; Paulus et al., 2002). Manipulating (a)symmetrical task-dependency in a creative task, Stevens and Fiske (2000) find that task-dependent, and especially powerless asymmetrically task-dependent participants, invested more effort in processing information about their interaction partners and were less likely to discount novel, expectancy-inconsistent information than symmetrically dependent or non-dependent participants. Similarly, being assigned to less (vs. more) powerful roles led individuals to pay more attention to individuating information and form more trait-driven (and less category-driven) impressions of others (Goodwin et al., 2000, Studies 3, 4). Interestingly, further research shows that these individuation effects are more pronounced when low-power actors face a heterogeneous group of powerholders (Dépret & Fiske, 1999).

In turn, research on the effects of experiential power shows that those primed with high (versus low) power display less perspective taking and accuracy in predicting how others perceive a message (Galinsky et al., 2006). Likewise, compared to a power-neutral control, high-power participants were less accurate in understanding others' emotions (Study 3). And Galinsky et al. (2008; Study 4) show that compared to a baseline, those holding or experiencing power were more likely to disregard information about an interaction partner. In sum, these results suggest that high-power actors are less attentive to others in their social context and thus less likely to derive insights from the diverse ideas and views present in a diverse context.

We further argue that beyond raising the chance that diversity elicits insights, prior work also suggest that low-power actors are more likely to see these insights as valuable. Low- and high-power actors have been shown to systematically differ in how much they value and emphasize their own thoughts and ideas over others' (Galinsky, Rucker, et al., 2015; Rucker et al., 2012). See et al. (2011, Studies 1, 2) found that continuous measures of experiential and structural power were positively related to confidence in one's own judgment and negatively to taking others' advice. Manipulating experiential power, Tost et al. (2012) further found high-power actors to be less likely to take advice than low- and neutral-power actors. In turn, low-power actors were less likely to ignore others' advice (Study 1) and more likely to tailor their advice taking to others' expertise than high-power actors (Studies 2, 3). Finally, some work finds that power's effects on the valuation of one's own vs. others' thoughts and ideas are stronger when others differ from the self. In this vein, Sachdev and Bourhis (1991) found dominant and equal-power members to show more outgroup discrimination than low-power subordinates who displayed less in-group favoritism in evaluating ideas. In sum, these findings support the prediction that when actors derive insights from diversity, low-power actors likely assign higher value to these insights – a key element of an inspiring insight (Thrash et al., 2014).

Finally, for an insight to inspire, it needs to feel (quasi-)passively evoked such that "inspiration per se is always a moment of receptivity for which the person denies (full) responsibility" (Thrash, 2020, p. 9). This means that agency is deferred to the inspiring object. Critically, power is closely tied to experienced agency. Inducing power fosters a sense of agency (Obhi et al., 2012) and high-power actors are more likely to perceive control over outcomes, even those beyond their control (Fast et al., 2009; Fast et al., 2012). In turn, low-power actors have been argued to experience greater situational influence (Keltner et al., 2003). Indeed, some work shows that when comparing structurally high- and low-power actors in a joint decision-making task, high-power actors assign more influence and input to themselves compared to their partners while low-power actors show the reverse pattern (Wojciszke & Struzynska-Kujalowicz, 2007). Complementing these findings, research on power's effect on inspiration found that as a result of their greater self

-focus, susceptibility to internal states, and self-appreciation, persons with a high sense of power are more inspired by their own experiences than by others' (van Kleef et al., 2015). In sum, we posit that diversity is more likely to trigger inspiration for low-power actors.

Hypothesis 1*: Power moderates the relationship between diversity and inspiration such that the relationship between diversity and inspiration is more positive for individuals who experience low (compared to high) levels of power.*

2.2. The effect of inspiration on creativity

Little research has examined inspiration's role in workplace creativity yet there are reasons to believe that employees who more frequently experience inspiration will display higher creativity. First, by definition, individuals who feel inspired gain awareness of better approaches and opportunities than the ordinary or routine from external triggers (they are inspired *by* something; Thrash & Elliot, 2004). In essence, evoked insights represent raw material for the generation of creative outcomes (Amabile, 1996; Shalley et al., 2004). Because creative ideas rarely come out of nowhere, insights about unexplored needs or novel information offer key resources for the recombination of existing elements into new, improved products, services, or processes (Hargadon & Sutton, 1997; Leahey & Moody, 2014; Welch, 1946).

Second, inspiration involves perceiving an insight as meaningful and valuable (Thrash & Elliot, 2004) which energizes actors to turn the insight into a concrete idea or product (they are inspired *to* do something; Thrash, Maruskin, et al., 2010; Thrash & Elliot, 2003). Being inspired thus propels persons to act on the insights they draw from their environment and transmit them into creative outcomes (Thrash, 2020; Thrash, Maruskin, et al., 2010). The resultant approach motivation fosters the goal-directed behavior and persistence (Milyavskaya et al., 2012) needed to realize and refine ideas (Titus, 2000). Indeed, prior research has found positive effects of state inspiration on the externally rated creativity of student papers and poems (Thrash, Maruskin, et al., 2010), has linked trait inspiration to students' creative self-identity, and inventors' trait inspiration frequency to the number of patents they hold (Thrash & Elliot, 2003). Thus,

Hypothesis 2: *Inspiration has a positive effect on creativity.*

2.3. The mediating role of inspiration of diversity's contingent effect on creativity

Based on the predicted interplay of diversity and power on inspiration and on inspiration's outlined potential to benefit creativity, we further predict that inspiration conditionally mediates the effect of diversity on creativity contingent on power. Prior work on inspiration argues that inspiration is uniquely suited to transmit the perceived intrinsic value of a trigger for inspiration into an outcome that results from the experience of inspiration (Thrash, Maruskin, et al., 2010). In this sense, it represents a mediating or intervening process such that an "encounter with a source of intrinsic value evokes inspiration, which in turn energizes transmission of the intrinsic value" (Cui et al., 2020, p. 661). Further explicating these arguments, Thrash (2020) recently described inspiration as a mimetic psychological state that is focused on expressing and realizing an externally gained insight. Its mimetic nature, and the explicit conceptualization of inspiration as two sequential component processes that are initiated by a passively received evocation of a transcending insight, render inspiration a uniquely fitting potential mediator between creativity-inducing situational influences and creative actions and products (Oleynick et al., 2014).

These characteristics also set inspiration apart from other emergent states and processes that are often studied or theorized to precede creativity like intrinsic motivation, creative self-efficacy (Liao et al., 2010; Zhou et al., 2012), or information elaboration (Li et al., 2017) for two reasons. First, these constructs, though core antecedents of creativity, are more goal-directed or telic which contrasts with inspiration's mimetic nature (Oleynick et al., 2014). Second, at least creative self-efficacy – a self-regulatory concept focusing on the interplay of self-referent cognitions, actions, and affect (Bandura, 1982) – and intrinsic motivation – which captures whether task engagement is self-controlled rather than externally driven (Amabile, 1996) – place a strong focus on the self as the locus of action and motivation. Inspiration instead emphasizes the evoking stimuli outside of the (conscious) self. In line with inspiration's mimetic function which is initiated by the passively received evocation of a worthy and new insight, we propose:

Hypothesis 3: *Inspiration mediates the interactive effect of diversity and power on creativity. Specifically, the conditional indirect effect of diversity on creativity is more positive at low (compared to high) levels of power.*

3. Overview of studies

We tested our hypotheses in three time-lagged studies. Study 1 drew on a large sample of Dutch university students working on a team-based HR-course project for a real organization. Study 2 was conducted to constructively replicate of our findings in a Chinese organizational sample using multi-source data. Study 3 extended our findings by using archival data on a sample of scientists working on the Manhattan Project (MP) to test position power's moderating role of the relation between project divisions' diversity and scientists' individual creativity.

In selecting the diversity attributes for each study, we applied the outlined theoretical logic to each study's context. In Study 1, in which student teams worked on an organization's HR-problem, we focused on nationality diversity. Differences in nationality have been argued to entail different life experiences that give rise to diverse knowledge, perspectives, and beliefs (Kearney & Gebert, 2009; McLeod et al., 1996). Given the acknowledged impact of national culture on HR systems, practices, and perceptions (Budhwar & Sparrow, 2002; Farndale & Sanders, 2017; Wang et al., 2020), these differences are task-relevant. Indeed, prior research on student teams working on an HR-task in a similar context found that diversity in national culture could benefit teams' elaboration and performance (Nederveen Pieterse et al., 2013). Finally, the context of the study emphasized the salience of nationality diversity with the business school priding itself in its international orientation and the courses often emphasizing the potential of nationality diversity. Other diversity attributes were either limited in range (students were uniformly young and enrolled in the same undergraduate program) or contextually less meaningful (e.g., gender, see Kooij-de Bode et al., 2008; Nederveen Pieterse et al., 2013 for similar arguments). In Study 2, we directly tapped into perceived differences in knowledge, perspectives, and skills. Theoretically, this allows for a more proximal test as we directly target the perception of cognitive differences that we argue nationality diversity proxies in Study 1. Pragmatically, it was necessitated because participants' work was not organized in clearly delimited social units. This prevented us from calculating compositional diversity indices. Finally, in Study 3, which focuses on the creativity of scientific publications, we study educational background diversity (determined by the field of scientists' PhD). This directly proxies different knowledge, perspectives, and skills which strongly matter for the task on which creativity is assessed and are meaningful in the context in which these scientists interacted.

Beyond testing our hypotheses, we wanted to answer additional empirical questions across our studies. First, to increase the rigor of our work, we test the proposed indirect effects through inspiration against other established precursors of workplace creativity. We included intrinsic motivation (Wang et al., 2016) and creative self-efficacy (see e.g., Liao et al., 2010; Zhou et al., 2012). Despite their benefits for creativity (Liu et al., 2016), these more telic (goal-directed) motivational states are less likely to fulfill inspiration's outlined transmission function

(Thrash, 2020). We also wanted to test our indirect effects against team information elaboration which to date is seen as the core process to underlie the benefits of diversity for teams (van Knippenberg, 2017; van Knippenberg et al., 2004) and individuals (Li et al., 2017). We test this in Study 1.

Second, we wanted to explore the linearity of power's moderating role. Theoretically, research suggests that whereas low- and high-power actors differ on some dimensions, they are also subject to shared effects that stem from both being embedded in asymmetric relationships (Magee & Smith, 2013; Schaerer et al., 2018). Recent research has shown that although power's effects are often assumed to be linear, few studies directly test such linearity by including various levels of power and adequate control conditions (Schaerer et al., 2018). Some of the research we cite is subject to these considerations. Many designs do not compare across high, moderate, and low power – either because no baseline condition is included or because they are neutral or no-manipulation controls which may not capture the moderate levels of power that we are interested in (see Duguid & Goncalo, 2015, Study 4 for an exception). Given these findings and the limited empirical basis that we can use to extrapolate whether the proposed moderating role unfolds linearly, we provide robustness tests assessing the linearity of the moderation (Studies 1 & 2).

Finally, although the aforementioned reduced agency for low-power actors (Obhi et al., 2012) may increase the likelihood that an actor is inspired by an insight derived from a diverse context, power's link to agency also raises the possibility that low power may simultaneously hinder an actors' ability to express their inspiration[1] into creativity. Because it is a priori difficult to predict whether the approach motivation gained through the experienced evocation and transcendence outweighs the per se lower approach motivation of low-power actors, we decided to test the possibility that power moderates inspiration's relationship with creativity such that this relationship is stronger for high-power actors in an exploratory fashion in Studies 1 and 2.

The data and code for Studies 1 and 2 is available under https://osf.io/g4jdx/?view_only=707dceb4ce1242f68818881d42365e82. The data and code for Study 3 is available upon request from the second author. All referenced appendices are included in the osf folder.

4. Method – Study 1

4.1. Sample and procedure

We conducted an initial test of our hypotheses on a sample of 854 Third-Year Business Administration (BA) Bachelor students (45.3% female) at a Dutch university nested in 187 teams of 3–6 members (mean = 5.16) who provided complete data across two surveys (88.5% of the 965 eligible participants and 187 teams). The setting offered key advantages. First, all students were enrolled in one of two sections of a ten-week HRM course that included a mandatory team project (35% of the grade). This provided us with a clearly delimited time frame (i.e., known project onset and duration) and standardized task, ruling out differences in task requirements. Teams had to diagnose, analyze, and solve an HR-related problem in a real company. Though the project or the organization of the work could benefit from it, creativity was discretionary and not explicitly assessed. We measured diversity through administrative records and conducted two surveys to assess power and inspiration (at the midpoint) as well as creativity (at the end). Survey participation was voluntary but rewarded with partial course credit.

We had access to a large sample of stable and bounded teams, allowing us to get a complete view of the teams' diversity. Due to one section of the course belonging to the Dutch and the other to the international BA program, the teams in our sample varied widely in their diversity (Blau's index: 0.00–0.80). The sections were otherwise highly comparable including the same teachers, content, structure, and exam. Further, and as argued above, nationality diversity is in line with our theoretically derived criteria of entailing differences in knowledge and perspectives which are task-relevant and salient in the given context. Indeed, nationality is often emphasized as a valuable resource for learning in the program. More broadly speaking (and notwithstanding its potential to instigate conflict, Ayub & Jehn, 2006; Jehn et al., 1999), prior research speaks to nationality diversity's potential to afford individuals with different insights and views (Curşeu, 2010; Kearney & Gebert, 2009; McLeod et al., 1996). Critically, this also holds for work conducted in a similar context (Nederveen Pieterse et al., 2013).

4.2. Measures

Surveys were conducted in English (see Appendix A.1 for the full set of items).

Nationality Diversity. We obtained complete information on member nationality and team diversity from the student administration records. Our sample contained students from 50 nationalities with the largest proportions being Dutch (67.1%), German (6.2%), French (4.4%), American (2.8%), Italian (2.6%), and Chinese (2.2%). Given that nationality is categorical, we relied on Blau's (1977) index of heterogeneity to assess team nationality diversity.

Sense of Power. We used Anderson and Galinsky's (2006) eight-item scale which assesses both the experience of low and high control. Participants recorded their answers five weeks into the project using a scale from *1 = strongly disagree* to *5 = strongly agree.* They were instructed to consider their sense of power within the team and project so far. Although widely used, the internal consistency of the scale was lower than desirable ($\alpha = 0.63$).

Inspiration. We measured inspiration at the same time point. Because the literature has reported various adaptations to Thrash and Elliot's (2003) original scale for different study goals and settings, we relied on a combination of the four-item original scale (stated in the past tense to reflect state inspiration) and four additional items of the scale used by Thrash, Maruskin, et al. (2010) to measure inspiration experienced during a specific, time-bound task. Further, and in line with prior work which suggests that over time, frequency recollections are more accurate than intensity recollections (Thomas & Diener, 1990; Thrash, Maruskin, et al., 2010), we assessed perceived frequency of inspiration during the team project so far on a scale from *1 = never* to *5 = very often.* The eight items ($\alpha = 0.86$) were averaged into a single score. In line with prior work (Thrash & Elliot, 2003; Thrash & Elliot, 2004, Thrash, Elliot, Maruskin, & Cassidy, 2010; Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010), we did not provide respondents with an example of inspiration.

Creativity. We measured individuals' creativity with a separate survey at the end of the project using a three-item scale ($\alpha = 0.89$). Given that creativity was not formally assessed in the project and because creative contributions may not always be observable to others (Janssen, 2000), participants assessed their own creativity on a scale from *1 = never* to *5 = very often.* Following prior recommendations on creativity measurement (Hennessey et al., 2011) we did not provide respondents with a definition or example of creativity.

Control Variables. In line with recent work on the use of control variables, we were conservative regarding their inclusion (Aguinis & Vandenberg, 2014). Beyond the variables in the model, we decided to control for team size given work showing the effect of team size on team processes and outcomes (Jackson et al., 1991) and in line with prior work on diversity (e.g., Dahlin et al., 2005; Kearney & Gebert, 2009). Likewise, although the sections were highly similar, we controlled for course section, to rule out any differences in addition to the obvious difference of one section being more international and thus having higher levels of diversity.

Alternative Mediators. Our theoretical account of diversity as a creativity-enhancing situational influence renders inspiration with its transmission function (Cui et al., 2020; Oleynick et al., 2014; Thrash

[1] We thank an anonymous reviewer for this excellent suggestion.

et al., 2014) particularly suited to channel the influence of diversity on individual creativity. Still, to offer a rigorous test of its impact, we assessed inspiration's relationship vis-à-vis three alternative mediators (intrinsic motivation, creative self-efficacy, and information elaboration). We measured intrinsic motivation with a scale by Tierney et al. (1999; α = 0.80; five items). Creative self-efficacy was assessed using a scale by Tierney & Farmer (2002; α = 0.57; three items). We used three items from Kearney and colleagues' scale to measure information elaboration (Kearney et al., 2009; α = 0.82).

5. Results – Study 1

5.1. Data structure and analytical strategy

Our data (see Table 1 for descriptive statistics and correlations) has a multi-level structure with individual observations nested in teams and some variables (diversity, team size, course section) measured at the team level (L2) and others (power, inspiration, creativity) at the individual level (L1). Hence, we performed multi-level analyses. We first assessed the degree of non-independence. Team membership accounted for a negligible part of the variance in inspiration (*ICC1* = 0.01) and a small to moderate part of the variance in creativity (*ICC1* = 0.09). The literature on multi-level moderation and mediation (Aguinis et al., 2013; Preacher et al., 2016; Zhang et al., 2009) advocates for separating within- and between-group effects through appropriate centering choices. Following this advice, we group-mean centered all substantive L1-predictors (see Appendix A.4 for convergent results with alternative centering choices). Finally, following recommendations for their use (Aguinis & Vandenberg, 2014) we only retained control variables with a significant relationship with the mediator or dependent variable (i.e., course section but not team size). Sensitivity analyses including all or none of the designated controls yielded convergent results (Appendix A.3).

5.2. Confirmatory factor analysis

We conducted a multi-level confirmatory factor analysis (CFA; MPLUS, Version 8, including a within component for each measure and a between component for measures with meaningful between variance [*ICC1* ≥ 0.10; Bliese & Hanges, 2004]) to establish the discriminant validity of our model's core variables and the alternative mediators. A six-factor model with power, inspiration, creativity, intrinsic motivation, creative self-efficacy, and elaboration loading on separate factors offered a satisfactory fit to the data ($\chi 2[390] = 857.45$, $p < .001$, RMSEA = 0.04., CFI = 0.94). Importantly, its fit was superior to that of various alternative models including models combining inspiration and/or the alternative mediators with creativity, models combining inspiration with the alternative mediators, a model combining power and creative self-efficacy, and a single factor model (all CFI < 0.90, all RMSEA > 0.05; all $\chi 2\Delta > 302.54$, all dfs [$\chi 2\Delta$] ≥ 5, all p [$\chi 2\Delta$] < 0.001), see Appendix A.2 for the full list of models and indicators).

5.3. Diversity's relationship with inspiration

To test H1, which posited that diversity has a more positive relationship with inspiration when power is low, we ran random-intercept, fixed-slope models to predict inspiration (Table 2). The first model included only the random intercept which was associated with very little variance ($\tau_{00} = 0.01$). Next, we entered course section, nationality diversity, and power as predictors of inspiration, and finally the diversity × power interaction. The interaction was in the predicted negative direction indicating that the relationship between diversity and inspiration tended to be stronger at lower levels of power, yet the coefficient fell short of standard levels of significance (γ = -0.37, SE = 0.20, t = -1.91, p [two-tailed] = 0.06). Simple slope analyses showed that the relationship of diversity with inspiration exhibited the expected pattern: The slope was negative and not significant at high power (+1SD, $b = -0.03$, $SE = 0.17$, $t = -0.16$, $p = .87$), positive and non-significant at mean power (mean, $b = 0.14$, $SE = 0.14$, $t = 0.99$, $p = .32$) and positive, and just short of standard levels of significance at low power (-1SD, $b = 0.31$, $SE = 0.17$, $t = 1.85$, $p = .07$). In sum, although these findings do not offer strict support for H1, the observed relationships (see Fig. 2) were in the direction and form expected in H1.

5.4. Inspiration's relationship with creativity

To test the relationship between inspiration and creativity, we ran random-intercept, fixed-slope models predicting creativity (Table 2). The first model only contained the random intercept which was associated with a significant amount of variance ($\tau_{00} = 0.06$, $p = .004$). We then added power, inspiration, nationality diversity, and course section as predictors. In support of H2, inspiration was positively related to member creativity (γ = 0.17, $SE = 0.04$, $t = 4.78$, $p < .001$).

5.5. The mediating role of inspiration

To test the conditional indirect effects of nationality diversity on creativity through inspiration contingent on power (H3), we relied on a procedure developed for R (Imai et al., 2010; Imai et al., 2014). It is based on the counterfactuals logic and offers a general framework for mediation analysis that includes current mediation analysis methods such as Hayes (2013) as special cases. The procedure tests the conditional indirect effects based on estimates from multi-level analyses using Monte Carlo-based confidence intervals which have been shown to be comparable to but more conservative than bias-corrected bootstrapped confidence intervals (MacKinnon et al., 2004). The analysis showed that the conditional indirect effect of diversity on creativity through inspiration was positive but not strictly significant at low power (0.05, 95%

Table 1
Descriptive statistics and bivariate correlations – Study 1.

Variable	Mean	SD	1.	2.	3.	4.	5.	6.
Level 1 variables								
1. Sense of power	4.02	0.52	(0.63)					
2. Inspiration	3.93	0.81	0.10**	(0.86)				
3. Intrinsic motivation	4.24	0.69	0.10**	0.27***	(0.80)			
4. Creative self-efficacy	4.22	0.65	0.12**	0.28***	0.47***	(0.57)		
5. Information elaboration	3.94	0.67	0.32**	0.21***	-0.01	0.00	(0.82)	
6. Creativity	4.05	0.78	0.13***	0.19***	-0.00	0.03	0.24**	(0.89)
Level 2 variables								
1. Team size	5.16	0.59						
2. Course section	1.53	0.50	-0.62***					
3. Nationality diversity	0.25	0.31	0.46***	-0.79***				

Note. Correlations between L1 variables are based on a sample of 854 individuals who provided data for both measurement times. Values in parentheses are internal consistencies. Correlations between L2 variables are based on a sample of 187 teams.
* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Table 2
Results of the multi-level analyses – Study 1.

	Inspiration				Creativity			
	γ	*SE*	*t*	*p*	*γ*	*SE*	*t*	*p*
Null model								
Intercept	3.93	0.03	138.10	<0.001	4.05	0.03	130.30	<0.001
Level 1 main effects								
Sense of power	0.10	0.06	1.57	0.12	0.15	0.06	2.70	0.01
Inspiration					0.17	0.04	4.78	<0.001
Level 2 main effects								
Course section	0.07	0.09	0.79	0.43	−0.24	0.10	−2.53	0.01
Nationality diversity	0.14	0.14	0.99	0.32	−0.07	0.15	−0.43	0.67
Level 1 variance explained: 0.00					Level 1 variance explained: 0.04			
					Level 2 variance explained: 0.08			
Interaction								
Nationality diversity × Sense of power	−0.37	0.20	−1.91	0.06				
Level 1 variance explained: 0.01								

Note. Estimates are based on a sample of 854 members nested in 187 teams. Proportion of L1 and L2 variance explained is calculated following (Raudenbush & Bryk, 2002). As there is no meaningful L2 variance for inspiration, only explained L1-variance is calculated for these models. In these models, L1 predictors (sense of power and inspiration) are group-mean centered, L2 predictors (diversity) are grand-mean centered. Categorical predictors (course section) are uncentered. Models with grand-mean centered L1-predictors yield convergent results (see Appendix A.4).

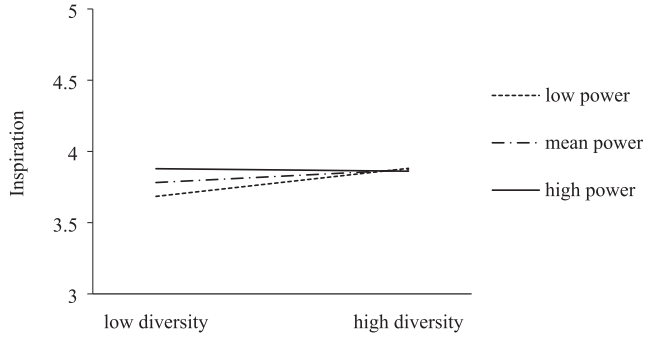


Fig. 2. The interaction of sense of power and nationality diversity on inspiration – Study 1.

CI: −0.004; 0.12), but tended to be weaker at mean (0.02, 95% CI: −0.02; 0.08) and high power (–0.005; 95% CI: −0.06; 0.05). A test of moderated mediation comparing the indirect effects showed that these differences were just short of standard levels of significance (Δ 0.06; 95% CI: −0.001; 0.13, p =.052). These findings mirror the results for H1 and offer tentative support for H3, such that the pattern is consistent with our predictions but not strictly significant.

5.6. Exploratory analyses

Ruling out Alternative Mediators. We further assessed whether our mediating effects through inspiration were unique (vs. would extend to alternative mediators) and robust to the inclusion of these alternatives. We first ran a set of models testing whether intrinsic motivation (IM), creative self-efficacy (CSE), and information elaboration (IE) each mediate the interaction of diversity and power on creativity (see Appendix A.5.1 to A.5.7). We found no indirect effects of diversity on creativity through IM at low (-0.00; 95% CI: −0.02; 0.01), mean (0.00; 95% CI: -0.01; 0.01), or high (0.00; 95% CI: −0.01; 0.02) power. Likewise, CSE did not mediate at low (-0.00; 95% CI: −0.02; 0.02), mean (-0.00; 95% CI: −0.01; 0.01), or high (0.00; 95% CI: −0.02; 0.02) power. Also, IE did not mediate at low (-0.01; 95% CI: −0.07; 0.05), mean (-0.01; 95% CI: −0.07; 0.04), or high (–0.02; 95% CI: −0.08; 0.04) power. Hence, neither of these alternative processes and states served as a (conditional or unconditional) mediator.

Second, we reran our mediation analyses with inspiration as the focal mediator each time controlling for the effect of an alternative mediator as a predictor of creativity. The results showed that the relationship between inspiration and creativity is robust to the inclusion of intrinsic motivation (γ_{INSP} = 0.18; SE = 0.04. t = 5.04, p <.001), creative self-efficacy (γ_{INSP} = 0.18, SE = 0.04, t = 4.97, p <.001), and elaboration (γ_{INSP} = 0.15, SE = 0.04, t = 4.24, p <.001). Further, the pattern of conditional indirect effects remained unchanged. The indirect effect of diversity on creativity through inspiration at low power (estimate without alternative mediators: 0.05, 95% CI: −0.004; 0.12) remained unaffected by including intrinsic motivation (0.06; 95% CI: −0.005; 0.12), creative self-efficacy (0.06; 95% CI: −0.003; 0.12), or elaboration (0.05; 95% CI: −0.003; 0.11). The indirect effect of diversity on creativity through inspiration remained nonsignificant at mean and high power when we controlled for intrinsic motivation (mean: 0.03; 95% CI: -0.02; 0.08; high: −0.005; 95% CI: −0.07; 0.06), creative self-efficacy (mean: 0.03; 95% CI: −0.02; 0.08; high: −0.01; 95% CI: −0.07; 0.05), and elaboration (mean: 0.02; 95% CI: −0.02; 0.07; high: −0.004; 95% CI: −0.06; 0.05). These results suggest that the alternative mediators do not account for the observed pattern of relationships through inspiration.

Linearity of Power's Moderating Role. We further tested whether power's moderating relationship was linear. First, we tested, but found no significant interactions of diversity with the squared power term (γ = -0.10; SE = 0.30, t = -0.32, p =.75) nor with the cubed power term (γ = 0.06; SE = 0.43, t = 0.15, p =.88). Second, we plotted the residuals against the predicted values, values of power, and values of the power × diversity interaction to check for undetected non-linear trends. We did not observe these (see Appendix A.6 for the plots & regression outputs).

Power as a Second Stage Moderator. Beyond the predicted first-stage moderation, we also tested whether power accentuated inspiration's relationship with creativity by adding the power × inspiration interaction to the models predicting creativity. This interaction was significant and positive (γ = 0.18, SE = 0.08, t = 2.35, p =.02). The simple slope of inspiration on creativity was significant at high (b = 0.25, SE = 0.05, t = 5.05, p <.001) and moderate power (b = 0.17, SE = 0.04, t = 4.79, p <.001), but was weaker at low power (b = 0.08, SE = 0.05, t = 1.68, p =.09, see Appendix A.7).

6. Discussion – Study 1

The results of Study 1 tentatively support our arguments about diversity's potential to elicit inspiration among those experiencing different levels of power and provide evidence that inspiration promotes creativity. Interestingly, our exploratory analyses show that inspiration was more strongly related to creativity for those experiencing high power, suggesting that though diversity is more strongly related to inspiration at low levels of power, its downstream benefits for creativity are weakened for the same set of actors. Despite broadly aligning with our hypotheses, the results are weaker than expected and subject to caveats that we sought to address in Study 2. First, our student teams may have experienced a restricted level and range of power (the mean [4.02/5.00] and small SD [0.52] suggests that students largely experienced medium to high power). This is problematic as we expect diversity to play a stronger role when power is low. Second, Study 1 did not include a formal external assessment of members' contributions to the project leading us to rely on self-assessed creativity. Using self-assessed creativity is defensible in some cases (e.g., when actors possess the best insight into their creative behaviors [Axtell et al., 2000; Janssen, 2000; Shalley et al., 2009)] and when creativity is not externally encouraged or rewarded and thus low in social desirability [Ng & Feldman, 2012]). Yet other work on the validity of creative self-assessment advises replications with other-rated or product-based creativity scores (Kaufman, 2019; Reiter-Palmon et al., 2012). We thus aimed to replicate our findings in an organizational context with higher variance in experienced power and access to leader-rated creativity scores.

Moreover, we sought to constructively replicate our results for diversity within a team to diversity that individuals perceive in their broader work environment. Testing the role of perceived diversity is informative as parts of our arguments rest on individuals noticing and valuing the diverse knowledge, views, and beliefs held by others in their work environment. Although we posit that nationality diversity in Study 1 served as such a source of diverse beliefs, knowledge, and views, we directly test the impact of these diversity perceptions in Study 2.

7. Method – Study 2

7.1. Sample and procedure

We collected data from 210 employees and their 17 supervisors working in a Chinese insurance sales company. Most respondents were employed to sell policies or handle customer service requests (84.76%). The remaining employees worked in jobs without direct customer contact (e.g., training the salespeople, monitoring service quality, administrative support, and managing promotions). Given the variety of tasks and the fact that work in this company was not organized in teams or other clearly delineated social units that could be used to construct compositional diversity indicators, focusing on perceived cognitive diversity was both pragmatic and theoretically informed. During initial conversations with the organization, we learned that though employees' jobs were traditionally not very high in creativity requirement, the company valued creativity to improve its offerings. We collected data on site at three time points using paper surveys which were linked using unique identifiers to ensure the confidentiality. At T1, 225 out of the company's 226 employees (99.6%) returned usable surveys. Two weeks later (T2), another survey was distributed to the same employees yielding 210 (92.9%) complete responses. Finally, another week later (T3), the supervisors rated the creativity of these 210 subordinates. All supervisors responded leaving 210 participants with complete data across surveys. Data from two supervisors rating one and two employees each were excluded from the analyses as the low number of within units left insufficient degrees of freedom to test for the proposed effects, reducing the sample to 207 employees rated by 15 supervisors.

The employees in our sample (48.3% male) were relatively young (97.6% reported ages below 30 years), had an average tenure of 8.80 months (SD = 6.58), and had worked with their supervisors for an average of 7.38 months (SD = 5.45). All participants reported some college education including 12.6% with a degree comparable to a US bachelor's degree and 1.4% with a master's degree. Respondents' study majors varied broadly (including economics, business administration, design, law, etc.). The majority (93.2%) of our participants had no management responsibilities, 6.8% held low-level management positions. Supervisors rated between 5 and 31 subordinates (M = 13.80, SD = 6.01). All respondents were Chinese nationals.

7.2. Measures

We created and used Chinese versions of all measures by following Brislin's (1980) translation-back translation procedure. All scales items are included in Appendix B.1.

Perceived Cognitive Diversity. We measured perceived cognitive diversity at T1 with Van der Vegt and Janssen's (2003) four-item scale (α = 0.86). Participants indicated the extent to which they perceived their coworkers to differ in their beliefs, way of thinking, worldviews, skills, and knowledge on a scale from *1 = to a very small extent* to *7 = to a very large extent*.

Sense of Power. We again relied on Anderson and Galinsky's (2006) scale. We assessed all eight items at T1, but the full scale was unreliable (α = 0.33) and items indicating high and low power loaded on different factors. Given our contention that the beneficial effect of diversity for inspiration should be most pronounced at low power, we proceeded to use the four items that focus on low power using a response scale from *1 = strongly disagree* to *7 = strongly agree*. We averaged responses to these four items into a scale of satisfactory internal consistency (α = 0.70).

Inspiration. At T2, we assessed the frequency with which employees felt inspired using the same scale (α = 0.89) as in Study 1 focusing on the time that had elapsed since the first survey. Participants registered their answers on a scale from *1 = never* to *7 = very often*.

Creativity. Employees' direct supervisors rated workplace creativity at T3 using George and Zhou's (2001) widely used 13-item scale (α = 0.95; Anderson et al., 2014). Supervisors indicated how characteristic a set of creative behaviors and outcomes are for each ratee on a scale from *1 = not at all characteristic* to *5 = very characteristic*.

Control Variables. We further collected data on various control variables. They included gender, age (in bands of 10-year increments), tenure within the company (in months), dyadic tenure with their supervisor (in months), position (employee vs. low-level manager vs. mid-level manager), job type (external work for customer vs. internal work), and education level (with categories ranging from 1 = elementary education to 9 = holding a Ph.D.-degree).

8. Results – Study 2

Table 3 displays the descriptive statistics and correlations for the variables in Study 2. Creativity significantly correlated with an employee's dyadic tenure with the supervisor and inspiration. Moreover, inspiration positively correlated with perceived cognitive diversity and sense of power. As in Study 1, we tested the relationships of our control variables with creativity and inspiration. Only dyadic tenure was a significant predictor and retained for the hypothesis tests. Sensitivity analyses with all or no controls yielded converging results (see Appendix B.3).

8.1. Data structure and analytical strategy

All core variables in this study are defined and measured at the individual level but because employees are nested in supervisors, we tested for non-independence in our data. Our results show that a large portion of the variance for the supervisor-rated variable creativity resided between supervisors ($ICC1$ = 0.46). There was no non-independence for the employee-rated mediator inspiration ($ICC1$ =

0.00). Given the amount of variance at the between-supervisor level for creativity, we used multi-level analyses to test our hypotheses. As in Study 1, we relied on random-intercept, fixed-slopes models with supervisor-mean centered (L1) predictors.

8.2. Confirmatory factor analysis

We conducted CFAs (MPLUS, Version 8) on the constructs of perceived diversity, power, inspiration, and creativity. A four-factor model with a separate factor for each construct provided a satisfactory fit to the data ($\chi2[371] = 698.11$, $p < .01$, RMSEA = 0.06, CFI = 0.91). The fit of this model was superior to a number of alternative models including a three-factor model collapsing inspiration and creativity into one factor, a three-factor model combining diversity and power into one factor, a two-factor model with diversity and power as one factor and inspiration and creativity as another factor, and a single-factor model (all CFI < 0.87, all RMSEA > 0.07; all $\chi2\Delta > 177.21$, all df $[\chi2\Delta] \geq 3$, all p $[\chi2\Delta] < 0.001$, see Appendix B.2 for the full CFA results).

8.3. Power's moderation of perceived cognitive diversity's relationship with inspiration

To test H1 which posited that the relationship between perceived diversity and inspiration is contingent on employees' sense of power, we ran a series of random-intercept fixed-slope models predicting inspiration (see Table 4). A first model including only the random intercept showed no variance associated with the intercept ($\tau_{00} = 0.00$). In a second model, including the control dyadic tenure and the predictors for perceived diversity and power, diversity had a significant relationship with inspiration ($\gamma = 0.14$, SE = 0.06, $t = 2.35$, $p = .02$) while the relationship with power was positive but just below standard levels of significance ($\gamma = 0.13$, SE = 0.06, $t = 1.96$, $p = .052$). Next, we entered the interaction between diversity and power. As predicted, the interaction coefficient was negative and significant (γ = -0.14, SE = 0.05, t = -2.66, $p = .008$) meaning that diversity's relation with inspiration was stronger at low power. Simple slope tests showed a significant positive relationship between diversity and inspiration at low (–1SD, $b = 0.29$, $SE = 0.08$, $t = 3.57$, $p < .001$) and mean power ($b = 0.15$, $SE = 0.06$, $t = 2.59$, $p = .01$), but not at high power (+1SD, $b = 0.01$, $SE = 0.07$, $t = 0.07$, $p = .94$). The significant interaction and the pattern of simple slopes (Fig. 3) support H1.

8.4. Inspiration's relationship with creativity

To test H2 that inspiration promotes creativity, we ran a series of random-intercept, fixed-slope models predicting creativity (Table 4, right). A model with only the random intercept showed that the intercept was associated with significant variance ($\tau_{00} = 0.31$, $p = .02$). We then entered dyadic tenure, perceived diversity, power, and inspiration. Supporting H2, inspiration was positively and significantly related to creativity ($\gamma = 0.10$, $SE = 0.04$, $t = 2.13$, $p = .03$).

8.5. The mediating role of inspiration

To test the conditional indirect effect of diversity on creativity through inspiration at different levels of power (H3), we used the same procedure as in Study 1, in this case specifying both the independent variable and the moderator at L1. Supporting H3, the analysis showed a significant conditional indirect effect of diversity on creativity through inspiration at low (0.03, 95% CI: 0.002; 0.06) and mean (0.01, 95% CI: 0.0004; 0.03) but not at high power (0.0004, 95% CI: −0.02; 0.02). A test of moderated mediation showed that the indirect effects at low and high power differed significantly (Δ0.03; 95% CI: 0.001; 0.07).

8.6. Exploratory analyses

Linearity of Power's Moderating Effect. We again tested whether power's moderating role was linear and found no consistent evidence of curvilinear trends. The quadratic interaction fell just below standard significance levels ($\gamma = 0.07$, $SE = 0.04$, $t = 1.80$, $p = .07$), the cubic interaction term was not significant ($\gamma = 0.03$, $SE = 0.02$, $t = 1.31$, $p = .19$). An inspection of the residual plots did not point to undetected non-linear trends (see Appendix B.4).

Power as a Second Stage Moderator. We again tested and found power to moderate inspiration's relationship with creativity ($\gamma = 0.11$, $SE = 0.04$, $t = 2.67$, $p = .008$). Inspiration's simple slope was significant at high ($b = 0.23$, $SE = 0.07$, $t = 3.43$, $p < .001$) and moderate ($b = 0.12$, $SE = 0.04$, $t = 2.61$, $p = .01$), but not at low power ($b = 0.01$, $SE = 0.06$, $t = 0.12$, $p = .91$; see Appendix B.5).

9. Discussion – Study 2

Using an employee sample in a different country, with participants working on a different task and using a more direct measure of perceived cognitive diversity among their coworkers, Study 2 provided converging evidence for our core predictions that diversity has a more positive relationship with inspiration for low- than for high-power actors and that inspiration promotes creativity. We again found opposing moderation patterns of sense of power on the relationships between diversity and inspiration as well as inspiration and creativity respectively, suggesting that gains in inspiration do not automatically manifest in corresponding creativity gains.

Though the convergence across settings strengthens the confidence in our findings, Studies 1 and 2 also share key characteristics. Both involve jobs with low creativity requirements, focus on sense of power, and rely on (self- or other-) rated creativity measures. Study 3 was designed to test our core proposition that low-power actors benefit more from the creativity-conducive situational influence of diversity in a setting characterized by different parameters. First, we relied on a sample of scientists working across divisions of a unique scientific endeavor – the Manhattan Project (MP). In this context we were able to tap into educational background diversity (derived from the scientists' PhD degrees). This operationalization represents a proximal source of task-relevant knowledge and perspectives with clear applicability for the task of producing scientific publications and high salience in the interactions in research teams. Second, we were able to test its effect contingent on position power (which some work suggests can have distinct effects compared to psychological power [Tost, 2015]). Doing so further allows us to follow up on the consistent evidence from the exploratory analyses for Studies 1 and 2 which show that inspiration's positive relationship with creativity does not fully materialize for low-power actors. Although not initially hypothesized, this finding raises the question whether low-power actors can under certain conditions observe the benefits of diversity for creativity. We test this possibility in Study 3.

10. Method - Study 3

This study uses a quasi-experimental design based on archival data to examine the interaction of diversity and power on creativity. Specifically, we examine whether position power moderates the relationship between educational background diversity and the creativity of

Table 3
Descriptive statistics and bivariate correlations – Study 2.

Variable	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Age	1.91	0.36										
2. Gender	1.52	0.50	-0.17*									
3. Position	1.07	0.25	0.23**	-0.05								
4. Dyadic tenure	7.38	5.45	0.06	0.02	0.25***							
5. Education level	7.14	0.45	0.25***	-0.14*	-0.04	-0.04						
6. Job type	0.14	0.35	0.26***	-0.06	0.06	0.10	0.28***					
7. Perceived diversity	3.94	1.19	-0.07	-0.03	-0.04	0.01	-0.03	-0.11	(0.86)			
8. Sense of power	4.48	1.14	0.05	0.15*	0.08	-0.05	0.13	-0.02	-0.12	(0.70)		
9. Inspiration	4.83	0.94	0.05	-0.07	0.04	-0.02	0.06	-0.03	0.14*	0.14*	(0.89)	
10. Creativity	2.53	0.79	0.04	-0.04	0.00	0.22**	0.05	-0.09	0.03	0.01	0.17*	(0.95)

Note. All values are based on a sample size of 207 individual employees. Internal consistency values are provided for all multi-item measures in the diagonal. Age is reported in age bands (1 < 20; 2 = 20–29; 3 = 30–39; 4 = 40–49;5 = 50–59; 6 = 60+), gender is coded 1 = male and 2 = female* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Table 4
Results of the multi-level analyses – Study 2.

	Inspiration				Creativity			
	γ	*SE*	*t*	*p*	*γ*	*SE*	*t*	*p*
Null model								
Intercept	4.83	0.07	73.56	<0.001	2.56	0.15	16.95	<0.001
Level 1 main effects								
Dyadic tenure	−0.00	0.01	−0.32	0.75	0.03	0.01	3.76	<0.001
Perceived diversity	0.14	0.06	2.35	0.02	0.00	0.04	0.00	0.99
Sense of power	0.13	0.06	1.96	0.05	0.05	0.04	1.13	0.26
Inspiration					0.10	0.04	2.13	0.03
	L1 variance explained: 0.03				L1 variance explained: 0.08			
Level 1 interaction								
Perceived diversity × Sense of power	−0.14	0.05	−2.66	0.008				
L1 variance explained: 0.05								

Note. Estimates are based on a sample of 207 employees rated by 15 supervisors. Proportion of L1 variance explained is calculated following (Raudenbush & Bryk, 2002). Predictors are group-mean centered around rating supervisors. Models are built stepwise (first intercept only, then main effects, then interaction term).

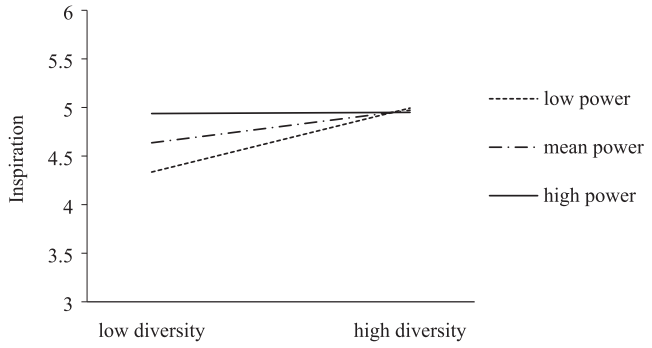


Fig. 3. The interaction between sense of power and perceived cognitive diversity on inspiration – Study 2.

scientists working in the Los Alamos site of the Manhattan Project (MP; 1943–1947), a large-scale scientific research project that culminated in the creation of the atomic bomb.

We focus on MP scientists in Los Alamos for the following reasons. First, we can investigate scientists' creativity through their scientific publications (Lee et al., 2015; Simonton, 2003; Uzzi et al., 2013). Unlike patents, which only offer computerized text records dating back to 1976, we can identify MP scientists' papers and use recent advances in scientometrics to determine whether they are creative without relying on raters.[2] Second, certain features of the MP address endogeneity concerns as the scientists could not self-select into the MP and were exogenously assigned to a job within the MP. The selection process for the MP unfolded as follows. The project's scientific advisors generated a list of candidates. The U.S. military then sent a personal letter that asked for the candidate to be released for essential war work to their university. At no point were the candidates aware of their selection to the MP. They were sent to Santa Fe (the location of Los Alamos was so highly classified that it was not on a map) and there found out that the work was to conduct research into the atomic bomb. Though scientists' assignment to divisions did reflect the pairing of expertise to problems, our core interest is in diversity. Crucially, participation in a diverse or homogenous division was exogenous to a scientist's preferences. As a result, we avoid the selection issue that can arise in observational settings as scientists did not choose to work in a diverse or homogenous division. Third, we can observe scientists' publication across time (before and after the MP), allowing us to use a pretest–posttest design (Reichardt, 2009). Performance pre-MP can act as a baseline for the assessment of post-MP performance in a similar fashion to a within-participant experimental design.

10.1. Sample and procedure

We identified 268 scientists and the divisions and groups that they worked with in Los Alamos (see Appendix C.1 for information on sources and population size estimates). Each scientist was assigned to a division ($N = 13$), such as chemistry or metallurgy; within divisions, scientists were assigned to groups ($N = 101$) such as analytical chemistry or plutonium metallurgy. We have full information on divisions, meaning we can place each scientist in a division and identify who they worked with. We have information on groups for 159 scientists (ca. 59% of the sample). Because we have full information on division-membership, we used it when calculating diversity. The results are robust to the use of

[2] As an anonymous reviewer noted, there were some restrictions on post-war publications. Our review of the literature and robustness tests suggest that these restrictions do not overly impact our analysis (see Appendix C.2).

group membership (see Appendix C.4.1).

We used Microsoft Academic Search (MAS) to identify scientists' publications. Microsoft pairs every author name in its database with a unique author identifier (MAS-ID). To avoid the common-surname problem and ensure that each identifier referred to the correct individual, two researchers manually and independently verified each name, ensuring that any MAS-ID (some individuals had multiple) corresponded to the right person. We then obtained every academic record MAS had for these scientists. Following Azoulay et al. (2014), we eliminated letters, comments, reviews, patents, and periodicals leaving only their scientific publications.

Observation Window. Since we compare the creativity of publications before and after the MP, we expand our observation window to 1933, 10 years before the MP begins, and end the observation window in 1957, 10 years after the MP ends. This ensures that we have a sufficient corpus of pre-MP articles to use as a baseline for the estimation of exposure to a diverse team during the MP and, given that time is needed to write scientific articles, that we end at a date for which exposure to diversity in the MP could have plausibly, impacted the production of scientific articles.[3] It is worth noting that shorter time windows like ours are recommended in quasi-experimental designs as they address time-related threats to internal validity, like MP scientists becoming better at the production of creative papers over time (Reichardt, 2009).

Sample. Out of the 268 scientists that worked in Los Alamos, 236 published at least once between 1933 and 1957. Since we use a pre/post design, we eliminate scientists that only published for the first time after the MP as these individuals do not have a pre period ($n = 115$). We also remove all scientists that worked in multiple divisions ($n = 31$) as these individuals were exposed to divisions that differed in their levels of diversity which hinders interpretation. The final dataset consists of 90 scientists (6.6% female) that published 3,011 papers during the observation window and 2,340 individual-year observations.

10.2. Measures

Creativity. Creativity is operationalized as the joint novelty and utility of a published article. We measure the creativity of each paper and use the number of creative papers published each year by a scientist working in Los Alamos as the dependent variable. To determine novelty, we draw on research on the originality of patents that uses the frequency of technological (sub)class combinations (Fleming, 2001; Strumsky & Lobo, 2015). We use MAS fields of study (FOS) as a proxy for technological classification. FOS are the keyword-based scientific classifications of articles (e.g., elemental particles). We measure the novelty of papers through the rarity of pairwise combinations of FOS (Lee et al., 2015). That is, we look at how often a certain combination of keywords is used each year.[4] A paper was denoted as novel if its FOS pair was in the 10th percentile or less (the FOS pair appeared in max. 10 percent of articles in its publication year). In essence, the rarity of knowledge combinations in a paper is used to determine its novelty. We use citations to measure utility as a citation represents another scientist's determination that the material in an article was useful (Lee et al., 2015). We focused on papers that were within the 10% most cited papers that year. For instance, papers published in 1933 needed to receive at least 9 citations that year to fall within this band.

Papers were considered creative when they met both criteria (i.e., were in the 10th percentile for citations and rarity of knowledge combinations). The results are robust to a variation of the creativity variable in which papers were considered creative when they were in the 5th percentile for both criteria (see Appendix C.5). Los Alamos scientists published 586 creative papers from 1933 to 1957 (approximately 19% of their total output).

Educational Background Diversity. We measured differences in perspectives and knowledge of the divisions that the MP scientists worked in through differences in members' educational background. Specifically, we used the academic discipline in which they obtained their university degree (PhD) – e.g., chemistry, physics, engineering – to construct a measure of educational background (EB) diversity. There were an estimated 300 civilian scientists at Los Alamos, and we have educational background information for 268 scientists (ca. 90%) which allows for a relatively accurate estimate of the division's diversity. Given this data's categorical nature, EB diversity was measured via Blau's (1977) index of heterogeneity.

Power. We assessed scientists' position power, defined as "the control an individual can exert because of his or her role in an institution" (Bombari et al., 2017, p. 55). We have data on the MP's formal hierarchy that details whether a scientist had a leadership position within their division (group head: $N = 28$; division head: $N = 5$). For instance, Enrico Fermi was the head for Los Alamos' F Division and responsible for the division's technical and scientific aspects, giving him control over the division's tasks and scientists. We created a three-level categorical variable for position power (1 = division member; 2 = group head; 3 = division head).

Post. Because we have a pre/post design, we use an indicator variable, post, that identifies post-MP years and allows us to identify and, if present, control for, time trends. This dichotomous variable takes a value of 0 for all years prior to the MP (1933–1943) and 1 for all years following the beginning of the MP at Los Alamos (1944–1957).[5]

Controls. We control for gender, division size, and for a scientist's career age, defined as the current year minus the publication year of the scientist's first article. This allows us to control for experience-related effects as well as career-specific trends that may influence creativity.

11. Results – Study 3

Table 5 reports the descriptive statistics and correlations for these variables.

11.1. Data structure and analytical strategy

We used a single group pre-test/post-test design similar to a within-person experimental analysis and the difference-in-differences framework used in economics to approximate causal estimates from observational data (Angrist & Pischke, 2008). Our empirical approach focused on whether exposure to a homogenous or diverse division corresponded with scientists with varying levels of position power (low vs. moderate vs. high) exhibiting different levels of creativity (see Finkelstein, 2007, for a similar approach). We therefore estimate the following empirical model:

$$\begin{aligned} C_{it} =& \alpha_t + \beta_1 Post_t + \beta_2 EB\ diveristy_{it} + \beta_3 Power_{it} + \beta_4 (Post\ x\ EB\ diversity)_{it} \\ &+ \beta_5 (Post\ x\ Power)_{it} + \beta_6 (EB\ diversity\ X\ Power)_{it} \\ &+ \beta_7 (Post\ X\ EB\ diversity \times Power)_{it} + X + \gamma_i + \epsilon_{it} \end{aligned} \quad (1)$$

[3] The results are robust to different observations windows (see the Appendix C.3.1).

[4] To identify keyword frequency, we downloaded 856,179 articles published between 1933 and 1957 containing information on 8,541 fields of study from MAS.

[5] The post variable begins in 1944 because scientists' creativity could be affected by their exposure to a diverse division from the start of the MP onwards. Because we do not know when exposure to diversity affects creativity, we account for possible changes in creativity arising from exposure to diversity in 1943 by having post start in 1944. The results are robust to the use of different time periods for the post variable and to the exclusion of articles published during the MP (see Appendices C.3.2 & C.3.3).

Table 5
Descriptive statistics and correlations — Study 3.

Variable	Mean	SD	1.	2.	3.	4.	5.	6.	7.
1. Creativity	0.12	0.51	1.00						
2. EB diversity	0.36	0.20	0.03	1.00					
3. Position power	0.36	0.54	−0.01	0.30***	1.00				
4. Post	0.57	0.49	−0.04	−0.01	0.01	1.00			
5. Gender	0.06	0.24	−0.03	−0.02	−0.18***	−0.01	1.00		
6. Division size	47.38	21.68	−0.04*	−0.51***	−0.19***	0.01	0.01	1.00	
7. Career age	13.18	11.37	−0.06**	0.05*	0.06**	0.46***	0.13***	−0.01	1

Note. Correlations are based on a sample of 90 individuals observed for a 25-year period (1933–1957) for a total of 2,340 individual-year observations. Gender is a dichotomous variable with 0 = Male and 1 = Female; There were 11 divisions ranging in size from 2 to 74 individuals.
* = p <.05; ** = p <.01; *** = p <.001.

Table 6
Results of the OLS analysis – Study 3.

	Model 1	Model 2	Model 3	Model 4	Model 5
Post	−0.15*	−0.12*	Omitted	−0.11+	Omitted
	(0.06)	(0.06)		(0.06)	
EB diversity	−0.04	−0.09	−0.09	Omitted	Omitted
	(0.15)	(0.17)	(0.17)		
Power	−0.05	−0.05	−0.05	Omitted	Omitted
	(0.09)	(0.09)	(0.09)		
Two-way interactions					
Post X EB diversity	0.36*	0.37*	0.37*	0.37*	0.38**
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
Post X Power	0.22*	0.22*	0.22*	0.22*	0.23*
	(0.10)	(0.09)	(0.10)	(0.09)	(0.09)
Power X EB diversity	0.08	0.09	0.09	Omitted	Omitted
	(0.17)	(0.18)	(0.18)		
Three-way interaction					
Post X EB diversity X Power	−0.54**	−0.55**	−0.55**	−0.55**	−0.56**
	(0.19)	(0.19)	(0.19)	(0.19)	(0.17)
Controls					
Gender		−0.06+	−0.06	Omitted	Omitted
		(0.03)	(0.03)		
Division size		−0.001	−0.001	Omitted	Omitted
		(0.001)	(0.001)		
Career age		−0.001	−0.002+	−0.003	−0.007+
		(0.001)	(0.001)	(0.002)	(0.004)
Observations	2340	2340	2340	2340	2340
Clusters	90	90	90	90	90
R squared	0.009	0.01	0.02	0.15	0.17
Year Fixed Effects	No	No	Yes	No	Yes
Scientist Fixed Effects	No	No	No	Yes	Yes

Note. + = p <.10; * = p <.05; ** = p <.01; ***=p <.001.

The dependent variable c_{it} is the number of creative articles that scientist i has produced in year t.[6] The key explanatory variable is the three-way interaction term (*Post X EB diversity* X *Power*) which captures change in the publication of creative articles between pre- and post-MP contingent on scientist's position power and MP division diversity. X is a vector of control variables that includes a scientist's gender, career age, and his/her division size. α_t and γ_i indicate year and scientist fixed effects which address several threats to internal validity arising from omitted variable bias. Due to serial correlation in the number of articles that a scientist publishes across years, we cluster standard errors at the individual-level.

11.2. The interaction of educational background diversity and position power on creativity

We report the results of estimating equation (1) in Table 6. Model 1 examined the relationships of the independent variables and their interactions without control variables or fixed effects. Model 2 added controls, Model 3 added year fixed effects, Model 4 added scientist fixed effects, and Model 5 included both year and scientist fixed effects.[7] Across all models, the interaction of interest, *post X EB diversity X power* was negative and significant. Fig. 4 (derived from model 1) depicts the predicted values of the dependent variable at different levels of the independent variables (to ease interpretation, we display the two-way

[6] Since the dependent variable has limited variance – with a maximum of 9 creative papers published in one year in the observation window – we use ordinary least squares (OLS) regression as the interpretation is relatively straightforward and we can use fixed effects to address omitted variable bias. Yet because the dependent variable is a count variable, we replicated this analysis with poisson and found substantively similar results (see Appendix C.6).

[7] To avoid collinearity, the dataset is structured so that the values of the independent variables are fixed across time (i.e., the same value for diversity appears across every row for a given author). If the values for diversity and power only appear in 1943–1947 or following the MP, they are collinear with each other and with post and we are unable to estimate the interaction terms of interest. Because of this structure, these time-invariant variables drop out of the equation with the use of year and author fixed effects. To ensure that the inclusion of fixed effects do not bias our estimates, we present models without these specifications.

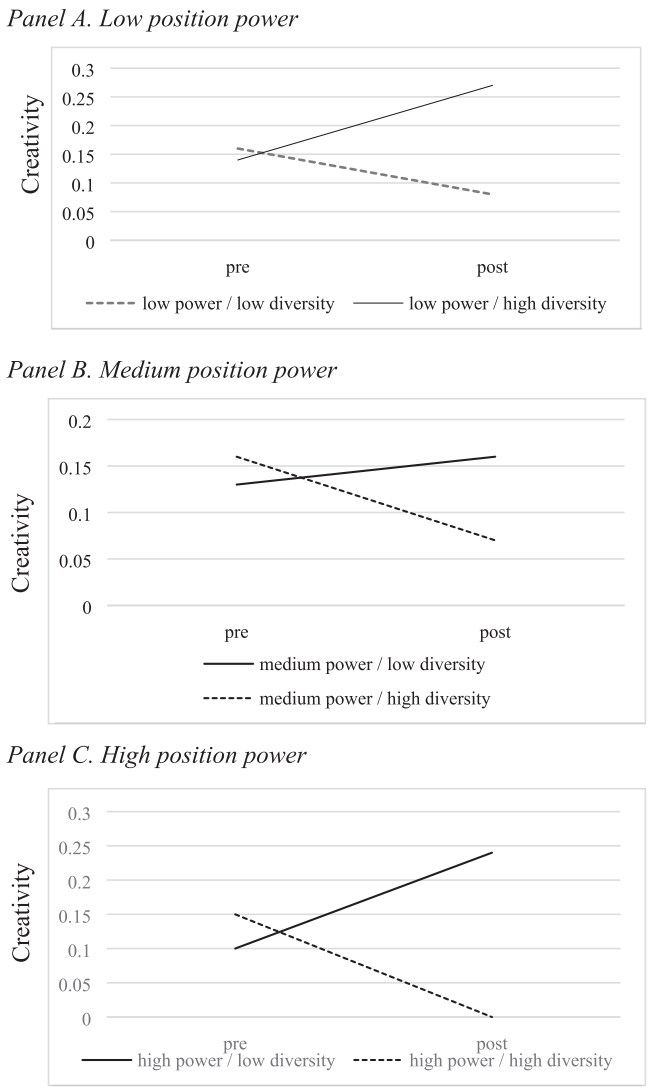


Fig. 4. The interaction between educational background diversity and position power on creativity—Study 3.

interactions that comprise the three-way interaction). We tested the simple slopes of post (differentiating pre- and post-MP) across different levels of power and diversity. When power and diversity were low, there was a significant negative effect of post on creativity (b = -0.08, SE = 0.04, t = -2.16, p =.03) indicating lower creativity post- compared to pre-MP. When power was low and diversity high, scientists were more creative post- compared to pre-MP (b = 0.14, SE = 0.07, t = 2.01, p =.048). At medium power, pre- and post-MP did not differ significantly either at low (b=0.03, SE = 0.05, t = 0.52, p =.60) or at high levels of diversity (b=-0.08, SE = 0.06, t = -1.33, p =.19). Finally, at high power and low diversity, we observed no significant coefficient for post (b=0.14, SE = 0.11, t = 1.18, p =.24), whereas at high power, high diversity creativity was marginally significantly lower post- compared to pre-MP (b=-0.15, SE = 0.09, t = -1.74, p =.086). As such, for low-power (but not medium- and high-power actors), exposure to high levels of diversity corresponded to an increase in creativity post-MP. In sum, this indicates that exposure to diversity during the MP had a differential positive relationship with the creativity of low-power scientists which supports our theoretical arguments that the benefits of diversity are stronger for low-power actors.

12. General discussion

In sum, our studies provide convergent evidence for the core idea that experiencing (Studies 1 & 2) or holding (Study 3) low power renders actors more responsive to the potentially creativity-enhancing situational influence of diversity. Whereas Studies 1 and 2 show these benefits for inspiration, Study 3 shows that these relationships can translate into higher individual creativity. Though derived from markedly different contexts and relying on different operationalizations of diversity, power, and creativity, our results support a common, key insight that contrasts with the relatively bleak picture painted by prior work on power's intersection with creativity for low-power actors. Specifically, by shifting the focus to power's role in moderating the influence of diversity as a creativity-enhancing influence, we show that those with low power can sometimes derive more inspiration (Study 2) and creativity (Study 3) from diversity.

12.1. Theoretical implications

This core insight and our findings make key contributions to the literatures on power, creativity, diversity, and their interplay. First, we offer a complementary view on power's role for creativity. Prior work on power and creativity has predominantly viewed situational influences as impediments to creativity and power holder's confidence, agency, and positive self-view as potent defenses against these detrimental influences (Duguid & Goncalo, 2015; Galinsky et al., 2008; Gervais et al., 2013). We combine these findings about power's effects with the recognition of creativity-enhancing situational influences from the workplace creativity literature (Amabile et al., 1996; Woodman et al., 1993) to predict and find power's inverse moderating relationship: That low-power actors are not only more constrained by creativity-inhibiting situational factors, but also benefit more from creativity-enhancing influences. This adds nuance to our knowledge about power's role for creativity. Though research has shown that power holders may not always enact their creative advantage (Gervais et al., 2013), our work uniquely points to conditions that enable low-power actors to achieve higher inspiration and creativity.

Second, our focus on creativity-conducive situational influences also leads us to introduce inspiration into the workplace creativity literature. Many have lauded inspiration as a precursor of creativity. Yet systematic research on its benefits for workplace creativity has been limited, in part due to its unclear conceptualization and distinction from related constructs. Building on its refined conceptualization around the three components of a new and worthy insight that is passively evoked and generates approach motivation to transmit the insight into action and products (Oleynick et al., 2014), we illustrate inspiration's role in transmitting the insights gained from the diversity in one's work environment into creativity and show its value compared to other mediators. Considering inspiration as a mechanism to promote workplace creativity is important because it may help to explain the effects of other beneficial social influences such as creative role models (Jaussi & Dionne, 2003; Zhou, 2003) or interventions to boost task significance (e.g., meeting beneficiaries of one's work; [Grant, 2008]) which may fit well with the less self-focused and goal-directed nature of inspiration. The importance of these situational stimulants of creativity and the ubiquity with which creators cite the experience of inspiration, underscore the value of further exploring inspiration's role for workplace creativity as a process that propels actors to express insights that originate outside of their direct control (Thrash, 2020). At the same time, and given the second stage moderation that we found in Studies 1 and 2, which indicate diminishing returns of inspiration for low power actors, we also caution researchers to consider which actors are more or less likely to translate their inspiration into creativity at work.

Our findings regarding inspiration are also relevant for the literature on diversity's cross-level effects on creativity (Li et al., 2017; Richter et al., 2012; Shin et al., 2012). This work is more nascent than team-level

research (see van Knippenberg & Hoever, 2017; van Knippenberg & Hoever, 2021 for reviews) and has aligned with team-level work to portray elaboration as the core mediator of diversity's benefits. Although our robustness tests show the expected benefits of elaboration for creativity in Study 1, elaboration was not affected by diversity's interplay with power, and inspiration and elaboration had independent effects. Hence, inspiration may offer a useful lens to explore a different set of contingencies of diversity for individual creativity than those implied by dominant team models focused on elaboration (van Knippenberg et al., 2004).

Third, by showing that power moderates the relation between a situational influence and individual creativity, our work also opens avenues to further integrate insights on power into the workplace creativity literature. Although hierarchies and individual differences in held or felt power are woven into the social fabric of organizations (Galinsky, Rucker, et al., 2015), an individual's power finds no mention in recent large-scale reviews on workplace creativity (Anderson et al., 2014; Zhou et al., 2019; Zhou & Hoever, 2014). Given that power has been shown to shift the balance of personal and situational influences (Blader & Chen, 2012; Galinsky et al., 2008) and that person-situation interactionism (Woodman et al., 1993) is a key meta-framework in workplace creativity research (van Knippenberg & Hirst, 2020; Zhou & Hoever, 2014), a more integral consideration of how power shapes these interactions holds promise.

Finally, our work offers a novel angle on the interplay of diversity and power – two key aspects of organizational structure. Diversity has clear power implications. The relative representation of demographic groups is a source of power (DiTomaso et al., 2007), certain diversity attributes reflect disparate resource access (Harrison & Klein, 2007), and power-related cultural values are meaningful diversity attributes (Kirkman & Shapiro, 2005). Our work suggests that power may also alter the experience of and benefits derived from diversity. This raises fascinating possibilities for investigation. For instance, because demographic attributes (e.g., race) can carry societal or representational power differences, is it possible that these attributes also render actors more receptive to diversity's impact? And what are the implications if those in high-power positions and majorities are less likely to benefit from and value diversity? Though beyond the scope of our data, these ideas underscore the value of considering the implications of what we show: That low-power actors are more inspired by diversity.

12.2. Limitations and directions for future research

Despite these contributions, our paper is subject to limitations that raise the need for future research. First, our data is non-experimental, and thus more prone to internal validity threats. We tried to mitigate these where possible. We rely on multi-source or archival data to reduce the risk of common source bias and use time-lagged designs for directional tests of our model. We also use design features (person-level fixed effects in Study 3; a standardized task and time frame in Study 1) and statistical controls to rule out potential confounds and alternative explanations. Still, though especially Study 3 approximated experimental design features (e.g., exogenous assignment to the MP, division, and role; control for person-level factors), experimental replications of our correlational findings would add value. Critically, such a replication would capture a shorter time span and less contextualized experience of power. As we argue that our effects occur in ongoing interactive contexts where actors can gain insights across multiple social encounters, the results of a replication in a shorter time frame remain an empirical question.

Second, though we relied on the most widely used scale to measure sense of power and had large individual-level samples in Studies 1 and 2, the internal consistency of the scale was lower than desirable. In Study 2, these constraints forced us to limit our analyses to the items measuring low power. The convergent results across the three studies reassure us somewhat that the scale's low reliability or restriction of the scale did not substantively distort our results. Yet additional work based on more reliable assessments of sense of power would be desirable.

Third, each study focused on a different diversity attribute and context. This can add to our findings' generalizability and the attributes were chosen following a consistent theoretical logic. Yet, our choices were also constrained by practical limitations in each study's context. In Study 1, educational background diversity could have also been task-relevant but was empirically uniform (all students studied the same program). For Study 3, it would have been interesting to test whether nationality diversity (arguably less task-relevant for producing scientific papers) has similar effects as the more task-relevant educational background diversity. Yet as nationality data was only available for a small and selective subset of our sample (biographical data is most accessible for prominent scientists), we cannot conduct such a test. And in Study 2, the lack of defined social units prevents us from testing which diversity attributes contributed to the perceived cognitive diversity. Hence, and although our diversity measures theoretically align when considered in their context, our three studies do not directly test this logic. Based on our findings, we would expect that diversity attributes that are a) proxies of cognitive differences, which are b) task-relevant, and c) salient and meaningful in a context exert similar effects. Future studies that directly test these criteria across contexts would be highly valuable.

Another limitation is that we could not measure inspiration in Study 3′s archival data because we cannot assess the scientists' experience. Interestingly, Thrash called inspiration's measurement "a vindication of self-report" (2020, p. 15) such that it could not be externally manipulated nor externally rated. As such, future studies combining survey- or interview-based measures of state inspiration with product-based creativity scores would add value.

Assessing the link between inspiration and product-rated creativity would also help to contextualize our findings on diversity's interaction with power on creativity. Studies 1 and 2 show the benefits of diversity's interplay with power for inspiration but also that low-power actors struggle more to translate this inspiration into creativity. In turn, Study 3 shows that diversity can benefit low-power actors' creativity. Further work is needed to fully explain these interesting differences. One explanation may be different creativity requirements. Creativity was discretionary in first two study contexts, yet scientific work has a strong creative component (Perry-Smith & Mannucci, 2016). Differences in creativity measures are another possible explanation. We already discussed the differences between self-rated creativity and other measures of creativity (Kaufman, 2019; Reiter-Palmon et al., 2012). Yet both self- and leader-ratings are perceptual and may thus be affected by an actor's power (Sijbom et al., 2016). The product-based creativity scores used in Study 3 are less subject to these concerns. Finally, Study 3 also differs from the other studies because creativity is measured in a context that differs from the one in which actors experience the combination of diversity and power that we argue inspires them. Given that an actor's power can differ across contexts, further work should explore when and how inspiration from one context can translate into creativity in another.

A further interesting extension of our work would be to study diversity's interaction with power at higher levels of analysis. We focused on the cross-level effects of diversity and power on individual inspiration and creativity. Yet in social contexts (e.g., teams, divisions) actors may also work interdependently towards shared goals. Given the more varied conceptualizations of power when applied to social units (e.g., as power level, disparity, and variety) and their distinct implications (Greer, 2014), such a shift opens many future research avenues. Likewise, because interdependence is core to collective creativity (Hoever et al., 2018), a shift in levels also poses interesting questions about the effects of diversity and power in more or less interdependent contexts which may shape how closely actors with different power levels need to interact.

Finally, our paper engages with two emergent themes in the power literature that further work on power's role for creativity should expand

upon. The first is the distinction of structural and psychological power which have been shown to entail distinct effects in certain domains (Tost, 2015; Tost & Johnson, 2019). Interestingly, in our case, the findings converge between the experience and the position of power. Although we lack the data to test this, our assumption is that this is because we consistently focus on power that is experienced or held within a real, ongoing social context. In contrast, prior work often compares position power to decontextualized experiences of power by assessing it as a generalized experience or inducing it through the recall of a prior, unrelated experience of power(lessness). We anticipate that structural and psychological power are more likely to converge when both are similarly contextualized and more likely to diverge when psychological power is decontextualized. Structural power typically at least implies contextualization because it is embedded in a specific setting (e.g., people are asked to imagine that they hold power in a given team or organization, invoking a specific social context). As such, we call upon further research to attend to whether power is structural or psychological as well as the extent to which it is contextually bound.

Likewise, and taking advantage of our continuous power measure, we probed but did not find consistent evidence for a curvilinear moderating role of power. Yet given both theoretical and empirical arguments that the effects of power may not always be linear (Magee & Smith, 2013; Schaerer et al., 2018), we encourage further work on creativity and diversity that integrates the effects of power to continue exploring the linearity of its effects.

12.3. Practical implications

Our research also informs managerial practice by pointing to the creative potential of low-power actors. This matters because creativity is often associated with agency (Proudfoot et al., 2015), raising the possibility that the creative potential of low-power actors is overlooked. Hence, and though we clearly do not advise managers to promote the experience of low power, our results suggest that managers should be aware of employees' experience of high or low power. Moreover, and given that we find that low-power actors derive more inspiration from (perceived) diversity, but simultaneously struggle more to translate this inspiration into creativity, it is practically relevant to create opportunities to support low-power actors' creativity.

Conversely, for high-power actors, additional managerial efforts might be needed to ensure that they are aware of and recognize the value afforded by diversity. Although we find that these actors do not lack inspiration, they appear less likely to derive it from the diversity in their work context thus suggesting that they leave some of the situational stimulants that may aid them in their creativity untapped. Following recent work, one way to do so (Tost et al., 2012) may be to alert high-power actors to the value of attending to diverse others in their environment for their own goal achievement (Tost et al., 2013). As such, managers could try to emphasize the value of considering the diverse viewpoints and of developing solutions for diverse stakeholders.

13. Conclusion

To succeed, organizations need to harness the full creative potential of their employees. Whereas prior research on power's role for creativity has largely considered high power as an advantage for creativity because it insulates actors against conformity pressures, our work shows that shifting the focus to creativity-enabling situational influences that highlight a variety of approaches to the task points to the indirect benefits of diversity for inspiration and creativity for low-power actors. In doing so, we add a key counterpoint to prior work on power and creativity, introduce inspiration as a new mediator to the workplace creativity literature, and direct attention to power's potential role in the research on workplace creativity and diversity more broadly.

CRediT authorship contribution statement

Inga J. Hoever: Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Visualization. **Nathan E. Betancourt:** Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Visualization. **Guoquan Chen:** Investigation, Data curation. **Jing Zhou:** Conceptualization, Methodology, Investigation, Resources.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data and code for Studies 1 and 2 will be openly accessible. The data for Study 3 will be available upon request.

Acknowledgements

We gratefully acknowledge the help of Richard J. Swartz and Zhen Zhang with the analysis of the data and of Kristen Nault and Dylan Hauser with literature research and coding. Guoquan Chen's work related to this project was supported by the Natural Science Foundation of China (Grant #72172071, 71772099).

References

Aguinis, H., Gottfredson, R. K., & Culpepper, S. A. (2013). Best-practice recommendations for estimating cross-level interaction effects using multilevel modeling. *Journal of Management, 39*(6), 1490–1528. https://doi.org/10.1177/0149206313478188

Aguinis, H., & Vandenberg, R. J. (2014). An ounce of prevention is worth a pound of cure: Improving research quality before data collection. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 569–595. https://doi.org/10.1146/annurev-orgpsych-031413-091231

Amabile, T. M. (1996). *Creativity in context: Update to the Social Psychology of creativity*. Westview Press.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*, 1154–1184. https://doi.org/10.2307/256995

Anderson, C., & Brion, S. (2014). Perspectives on power in organizations. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 67–97. https://doi.org/10.1146/annurev-orgpsych-031413-091259

Anderson, C., & Galinsky, A. D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology, 36*, 511–536. https://doi.org/10.1002/ejsp.324

Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality, 80*, 313–344. https://doi.org/10.1111/j.1467-6494.2011.00734.x

Anderson, N., Potocnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management, 40*, 1297–1333. https://doi.org/10.1177/0149206314527128

Angrist, J. D., & Pischke, J. S. (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton University Press.

Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology, 73*(3), 265–285.

Ayub, N., & Jehn, K. A. (2006). National diversity and conflict in multinational workgroups: The moderating effect of nationalism. *International Journal of Conflict Management, 17*(3), 181–202. https://doi.org/10.1108/10444060610742317

Azoulay, P., Stuart, T., & Wang, Y. (2014). Matthew: Effect or fable? *Management Science, 60*, 92–106.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*, 122–147. https://doi.org/10.1037/0003-066X.37.2.122

Blader, S. L., & Chen, Y.-R. (2012). Differentiating the effects of status and power: A justice perspective. *Journal of Personality and Social Psychology, 102*, 994–1014. https://doi.org/10.1037/a0026651

Blau, P. M. (1977). *Inequality and heterogeneity*. Free Press.

Bliese, P. D., & Hanges, P. J. (2004). Being both too liberal and too conservative: The perils of treating grouped data as though they were independent. *Organizational Research Methods, 7*, 400–417. https://doi.org/10.1177/1094428104268542

Bombari, D., Schmid Mast, M., & Bachmann, M. (2017). Felt power explains the link between position power and experienced emotions. *Emotion, 17*(1), 55–66.

Brislin, R. W. (1980). Translation and content analysis of oral and written materials. In J. W. Berry (Ed.), *Handbook of Cross-Cultural Psychology* (Vol. 2, pp. 389–444). Allyn and Bacon.

Brown, V., Tumeo, M., Larey, T. S., & Paulus, P. B. (1998). Modeling cognitive interactions during group brainstorming. *Small Group Research, 29*, 495–526. https://doi.org/10.1177/1046496498294005

Budhwar, P. S., & Sparrow, P. R. (2002). An integrative framework for understanding cross-national human resource management practices. *Human Resource Management Review, 12*(3), 377–403. https://doi.org/10.1016/S1053-4822(02)00066-9

Cui, Y., Thrash, T. M., Shkeyrov, R., Varga, P. J., & States, U. (2020). Inspiration. In *Encyclopedia of Creativity* (Vol. 1, pp. 660–666).

Curşeu, P. L. (2010). Team creativity in web site design: An empirical test of a systemic model. *Creativity Research Journal, 22*(1), 98–107. https://doi.org/10.1080/10400410903579635

Dahlin, K. B., Weingart, L. R., & Hinds, P. J. (2005). Team diversity and information use. *Academy of Management Journal, 48*, 1107–1123. https://doi.org/10.5465/AMJ.2005.19573112

Dépret, E., & Fiske, S. T. (1999). Perceiving the powerful: Intriguing individuals versus threatening groups. *Journal of Experimental Social Psychology, 35*(5), 461–480. https://doi.org/10.1006/jesp.1999.1380

DiTomaso, N., Post, C., & Parks-Yancy, R. (2007). Workforce diversity and inequality: Power, status, and numbers. *Annual Review of Sociology, 33*, 473–501. https://doi.org/10.1146/annurev.soc.33.040406.131805

Dugosh, K. L., Paulus, P. B., Roland, E. J., & Yang, H.-C. (2000). Cognitive stimulation in brainstorming. *Journal of Personality and Social Psychology, 79*, 722–735.

Duguid, M. M., & Goncalo, J. A. (2015). Squeezed in the middle: The middle status trade creativity for focus. *Journal of Personality and Social Psychology, 109*(4), 589–603. https://doi.org/10.1037/a0039569

Farndale, E., & Sanders, K. (2017). Conceptualizing HRM system strength through a cross-cultural lens. *International Journal of Human Resource Management, 28*(1), 132–148. https://doi.org/10.1080/09585192.2016.1239124

Fast, N. J., Gruenfeld, D. H., Sivanathan, N., & Galinsky, A. D. (2009). Illusory control. *Psychological Science, 20*(4), 502–508. https://doi.org/10.1111/j.1467-9280.2009.02311.x

Fast, N. J., Sivanathan, N., Mayer, N. D., & Galinsky, A. D. (2012). Power and overconfident decision-making. *Organizational Behavior and Human Decision Processes, 117*(2), 249–260. https://doi.org/10.1016/j.obhdp.2011.11.009

Finkelstein, A. (2007). The aggregate effects of health insurance: Evidence from the introduction of Medicare. *The Quarterly Journal of Economics, 122*, 1–37.

Fleming, L. (2001). Recombinant uncertainty in technological search. *Management Science, 47*, 117–132.

Gaither, S. E., Apfelbaum, E. P., Birnbaum, H. J., Babbitt, L. G., & Sommers, S. R. (2018). Mere membership in racially diverse groups reduces conformity. *Social Psychological and Personality Science, 9*(4), 402–410. https://doi.org/10.1177/1948550617708013

Galinsky, A. D., Magee, J. C., Gruenfeld, D. H., Whitson, J. A., & Liljenquist, K. A. (2008). Power reduces the press of the situation: Implications for creativity, conformity, and dissonance. *Journal of Personality and Social Psychology, 95*, 1450–1466. https://doi.org/10.1037/a0012633

Galinsky, A. D., Magee, J. C., Inesi, E. M., & Gruenfeld, D. H. (2006). Power and perspectives not taken. *Psychological Science, 17*, 1068–1074. https://doi.org/10.1111/j.1467-9280.2006.01824.x

Galinsky, A. D., Rucker, D. D., & Magee, J. C. (2015). Power: Past findings, present considerations, and future directions. In M. Mikulincer & P. R. Shaver (Eds.), *APA Handbook of Personality and Social Psychology, Volume 3: Interpersonal Relations.* (Vol. 3, pp. 421–460). American Psychological Association. https://doi.org/10.1037/14344-016.

Galinsky, A. D., Todd, A. R., Homan, A. C., Phillips, K. W., Apfelbaum, E. P., Sasaki, S. J., … Maddux, W. W. (2015). Maximizing the gains and minimizing the pains of diversity: A policy perspective. *Perspectives on Psychological Science, 10*(6), 742–748. https://doi.org/10.1177/1745691615598513

George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology, 86*, 513–524. https://doi.org/10.1037/0021-9010.86.3.513

Gervais, S. J., Guinote, A., Allen, J., & Slabu, L. (2013). Power increases situated creativity power increases situated creativity. *Social Influence, 4510*(4), 294–311. https://doi.org/10.1080/15534510.2012.742457

Goncalo, J. A., & Duguid, M. M. (2012). Follow the crowd in a new direction: When conformity pressure facilitates group creativity (and when it does not). *Organizational Behavior and Human Decision Processes, 118*(1), 14–23. https://doi.org/10.1016/j.obhdp.2011.12.004

Goodwin, S. A., Gubin, A., Fiske, S. T., & Yzerbyt, V. Y. (2000). Power can bias impression processes: Stereotyping subordinates by default and by design. *Group Processes & Intergroup Relations, 3*, 227–256.

Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology, 93*, 108–124. https://doi.org/10.1037/0021-9010.93.1.108

Guillaume, Y. R. F., Dawson, J. F., Otaye-Ebede, L., Woods, S. A., & West, M. A. (2017). Harnessing demographic differences in organizations: What moderates the effects of workplace diversity? *Journal of Organizational Behavior, 38*(2), 276–303. https://doi.org/10.1002/job.2040

Hargadon, A. B., & Sutton, R. I. (1997). Technology brokering and innovation in a product development firm. *Administrative Science Quarterly, 42*, 716–749. https://doi.org/10.2307/2393655

Harrison, D. A., & Klein, K. J. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review, 32*(4), 1199–1228.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. Guilford.

Hellmanzik, C. (2013). Does travel inspire? Evidence from the superstars of modern art. *Empirical Economics, 45*(1), 281–303. https://doi.org/10.1007/s00181-012-0617-x

Hennessey, B. A., Amabile, T. M., & Mueller, J. S. (2011). Consensual assessment. In M. A. Runco, & S. R. Pritzker (Eds.), *Encyclopedia of Creativity* (2nd ed., pp. 253–260). Academic Press. https://doi.org/10.1016/b978-0-12-375038-9.00046-7.

Hoever, I. J., Zhou, J., & van Knippenberg, D. (2018). Different strokes for different teams: The contingent effects of positive and negative feedback on the creativity of informationally homogeneous and diverse teams. *Academy of Management Journal, 61*(1), 2159–2181. https://doi.org/10.5465/amj.2016.0642

Imai, K., Keele, L., & Tingley, D. (2010). A general approach to causal mediation analysis. *Psychological Methods, 15*, 309–334. https://doi.org/10.1037/a0020761

Imai, K., Keele, L., Tingley, D., & Yamamoto, T. (2014). *Causal mediation analysis using R**. http://cran.r-project.org/web/packages/mediation/vignettes/mediation-old.pdf.

Jackson, S. E., Brett, J. F., Sessa, V. I., Cooper, D. M., Julin, J. A., & Peyronnin, K. (1991). Some differences make a difference: Individual dissimilarity and group heterogeneity as correlates of recruitment, promotions, and turnover. *Journal of Applied Psychology, 76*(5), 675–689.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology, 73*(3), 287–302. https://doi.org/10.1348/096317900167038

Jaussi, K. S., & Dionne, S. D. (2003). Leading for creativity: The role of unconventional leader behavior. *Leadership Quarterly, 14*, 475–498. https://doi.org/10.1016/S1048-9843(03)00048-1

Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly, 44*, 741–763.

Kaufman, J. C. (2019). Self-assessments of creativity: Not ideal, but better than you think. *Psychology of Aesthetics, Creativity, and the Arts, 13*(2), 187–192. https://doi.org/10.1037/aca0000217

Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: The promise of transformational leadership. *Journal of Applied Psychology, 94*, 77–89. https://doi.org/10.1037/a0013077

Kearney, E., Gebert, D., & Voelpel, S. (2009). When and how diversity benefits teams: The importance of team members' need for cognition. *Academy of Management Journal, 52*, 581–598.

Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265–284. https://doi.org/10.1037/0033-295X.110.2.265

Kirkman, B. L., & Shapiro, D. L. (2005). The impact of cultural value diversity on multicultural team performance. In D. L. Shapiro, M. A. Von Glinow, & J. L. C. Cheng (Eds.), *Managing Multinational Teams: Global Perspectives* (pp. 33–67). Elsevier.

Kooij-de Bode, H. J. M., van Knippenberg, D., & van Ginkel, W. P. (2008). Ethnic diversity and distributed information in group decision making: The importance of information elaboration. *Group Dynamics: Theory, Research, and Practice, 12*(4), 307–320. https://doi.org/10.1037/1089-2699.12.4.307

Leahey, E., & Moody, J. (2014). Sociological innovation through subfield integration. *Social Currents, 1*, 228–256. https://doi.org/10.1177/2329496514540131

Lee, Y. N., Walsh, J. P., & Wang, J. (2015). Creativity in scientific teams: Unpacking novelty and impact. *Research Policy, 44*, 684–697. https://doi.org/10.1016/j.respol.2014.10.007

Levine, S. S., Apfelbaum, E. P., Bernard, M., Bartelt, V. L., Zajac, E. J., & Stark, D. (2014). Ethnic diversity deflates price bubbles. *Proceedings of the National Academy of Sciences of the United States of America*, *111*(52), 18524–18529. https://doi.org/10.1073/pnas.1407301111.

Li, C.-R., Lin, C.-J., Tien, Y.-H., & Chen, C.-M. (2017). A multilevel model of team cultural diversity and creativity: The role of climate for inclusion. *Journal of Creative Behavior, 51*, 163–179. https://doi.org/10.1002/jocb.93

Liao, H., Liu, D., & Loi, R. (2010). Looking at both sides of the social exchange coin: A social cognitive perspective on the joint effects of relationship quality and differentiation on creativity. *Academy of Management Journal, 53*, 1090–1109.

Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2016). Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. *Organizational Behavior and Human Decision Processes, 137*, 236–263. https://doi.org/10.1016/j.obhdp.2016.08.001

MacKinnon, D. P., Lockwood, C. M., & Williams. (2004). Multivariate behavioral confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, *39*, 99–128. https://doi.org/10.1207/s15327906mbr3901.

Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *Academy of Management Annals, 2*, 351–398. https://doi.org/10.1080/19416520802211628

Magee, J. C., & Smith, P. K. (2013). The social distance theory of power. *Personality and Social Psychology Review, 17*(2), 158–186. https://doi.org/10.1177/1088868312472732

McLeod, P. L., Lobel, S. A., & Cox, T. H. (1996). Ethnic diversity and creativity in small groups. *Small Group Research, 27*, 248–264.

Milyavskaya, M., Ianakieva, I., Foxen-Craft, E., Colantuoni, A., & Koestner, R. (2012). Inspired to get there: The effects of trait and goal inspiration on goal progress. *Personality and Individual Differences, 52*, 56–60. https://doi.org/10.1016/j.paid.2011.08.031

Nederveen Pieterse, A., van Knippenberg, D., & van Dierendonck, D. (2013). Cultural diversity and team performance: The role of team member goal orientation. *Academy of Management Journal, 56*, 782–804. https://doi.org/10.5465/amj.2010.0992

Ng, T. W. H., & Feldman, D. C. (2012). A comparison of self-ratings and non-self-report measures of employee creativity. *Human Relations, 65*(8), 1021–1047. https://doi.org/10.1177/0018726712446015

Nijstad, B. A., Stroebe, W., & Lodewijkx, H. F. M. (2002). Cognitive stimulation and interference in groups: Exposure effects in an idea generation task. *Journal of Experimental Social Psychology, 38*(6), 535–544. https://doi.org/10.1016/S0022-1031(02)00500-0

Obhi, S. S., Swiderski, K. M., & Brubacher, S. P. (2012). Induced power changes the sense of agency. *Consciousness and Cognition, 21*(3), 1547–1550. https://doi.org/10.1016/j.concog.2012.06.008

Oleynick, V. C., Thrash, T. M., Lefew, M. C., Moldovan, E. G., & Kieffaber, P. D. (2014). The scientific study of inspiration in the creative process: Challenges and opportunities. *Frontiers in Human Neuroscience, 8*(June), 1–8. https://doi.org/10.3389/fnhum.2014.00436

Paulus, P. B., Dugosh, K. L., Dzindolet, M. T., Putman, V. L., & Coskun, H. (2002). Social and cognitive influences in group brainstorming: Predicting production gains and losses. *European Review of Social Psychology, 12*(1), 299–325. https://doi.org/10.1080/14792772143000094

Perry-Smith, J. E. (2014). Social network ties beyond nonredundancy: An experimental investigation of the effect of knowledge content and tie strength on creativity. *Journal of Applied Psychology, 99*(5), 831–846. https://doi.org/10.1037/a0036385

Perry-Smith, J. E., & Mannucci, P. V. (2016). From creativity to innovation: The social network drivers of the four phases of the idea journal. *Academy of Management Review, 42*, 53–79. https://doi.org/10.5465/amr.2014.0462

Perry-Smith, J. E., & Shalley, C. E. (2003). The social side of creativity: A static and dynamic social perspective. *Academy of Management Review, 28*, 89–106. https://doi.org/10.5465/AMR.2003.8925236

Preacher, K. J., Zhang, Z., & Zyphur, M. J. (2016). Multilevel structural equation models for assessing moderation within and across levels of analysis. *Psychological Methods, 20*, 1–17. https://doi.org/10.1037/met0000052

Proudfoot, D., Kay, A. C., & Koval, C. Z. (2015). A gender bias in the attribution of creativity: Archival and experimental evidence for the perceived association between masculinity and creative thinking. *Psychological Science, 26*(11), 1751–1761. https://doi.org/10.1177/0956797615598739

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models* ((2nd ed.).). Sage Publications Inc.

Reichardt, C. S. (2009). Quasi-experimental design. In *The SAGE handbook of quantitative methods in psychology* (pp. 490–500).

Reiter-Palmon, R., Robinson-Morral, E. J., Kaufman, J. C., & Santo, J. B. (2012). Evaluation of self-perceptions of creativity: Is it a useful criterion? *Creativity Research Journal, 24*, 107–114. https://doi.org/10.1080/10400419.2012.676980

Richter, A. W., Hirst, G., van Knippenberg, D., & Baer, M. (2012). Creative self-efficacy and individual creativity in team contexts: Cross-level interactions with team informational resources. *Journal of Applied Psychology, 97*, 1282–1290. https://doi.org/10.1037/a0029359

Rucker, D. D., Galinsky, A. D., & Dubois, D. (2012). Power and consumer behavior: How power shapes who and what consumers value. *Journal of Consumer Psychology, 22*(3), 352–368. https://doi.org/10.1016/j.jcps.2011.06.001

Sachdev, I., & Bourhis, R. Y. (1991). Power and status differentials in minority and majority relations. *European Journal of Social Psychology, 21*, 1–24. https://doi.org/10.1002/ejsp.2420210102

Schaerer, M., du Plessis, C., Yap, A. J., & Thau, S. (2018). Low power individuals in social power research: A quantitative review, theoretical framework, and empirical test. *Organizational Behavior and Human Decision Processes, 149*, 73–96. https://doi.org/10.1016/j.obhdp.2018.08.004

See, K. E., Morrison, E. W., Rothman, N. B., & Soll, J. B. (2011). The detrimental effects of power on confidence, advice taking, and accuracy. *Organizational Behavior and Human Decision Processes, 116*, 272–285. https://doi.org/10.1016/j.obhdp.2011.07.006

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management, 30*, 933–958. https://doi.org/10.1016/j.jm.2004.06.007

Shalley, C., Gilson, L., & Blum, T. (2009). Interactive effects of growth need strength, work context, and job complexity on self-reported creative performance. *Academy of Management Journal, 52*(3), 489–505.

Shin, S. J., Kim, T. Y., Lee, J. Y., & Bian, L. (2012). Cognitive team diversity and individual team member creativity: A cross-level interaction. *Academy of Management Journal, 55*, 197–212. https://doi.org/10.5465/amj.2010.0270

Shin, S. J., & Zhou, J. (2007). When is educational specialization heterogeneity related to creativity in research and development teams? Transformational leadership as a moderator. *Journal of Applied Psychology, 92*(6), 1709–1721.

Sijbom, R. B. L., Janssen, O., & Van Yperen, N. W. (2016). Leaders' achievement goals and their integrative management of creative ideas voiced by subordinates or superiors. *European Journal of Social Psychology, 46*(6), 732–745. https://doi.org/10.1002/ejsp.2223

Simonton, D. K. (2003). Scientific creativity as constrained stochastic behavior: The integration of product, person, and process perspectives. *Psychological Bulletin, 129*(4), 475–494.

Stevens, L. E., & Fiske, S. T. (2000). Motivated impressions of a powerholder: Accuracy under task dependency and misperception under evaluation dependency. *Personality and Social Psychology Bulletin, 26*(8), 907–922. https://doi.org/10.1177/01461672002610002

Strumsky, D., & Lobo, J. (2015). Identifying the sources of technological novelty in the process of invention. *Research Policy, 44*(8), 1445–1461.

Thomas, D. L., & Diener, E. (1990). Memory accuracy in the recall of emotions. *Journal of Personality and Social Psychology, 59*(2), 291–297. https://doi.org/10.1037/0022-3514.59.2.291

Thrash, T. M. (2020). The creation and curation of all things worthy: Inspiration as vital force in persons and cultures. *Advances in Motivation Science, 1–64*. https://doi.org/10.1016/bs.adms.2020.01.002

Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of Personality and Social Psychology, 84*, 871–889. https://doi.org/10.1037/0022-3514.84.4.871

Thrash, T. M., & Elliot, A. J. (2004). Inspiration: Core characteristics, component processes, antecedents, and function. *Journal of Personality and Social Psychology, 87*, 957–973. https://doi.org/10.1037/0022-3514.87.6.957

Thrash, T. M., Elliot, A. J., Maruskin, L. A., & Cassidy, S. E. (2010). Inspiration and the promotion of well-being: Tests of causality and mediation. *Journal of Personality and Social Psychology, 98*, 488–506. https://doi.org/10.1037/a0017906

Thrash, T. M., Maruskin, L. A., Cassidy, S. E., Fryer, J. W., & Ryan, R. M. (2010). Mediating between the muse and the masses: Inspiration and the actualization of creative ideas. *Journal of Personality and Social Psychology, 98*, 469–487. https://doi.org/10.1037/a0017907

Thrash, T. M., Moldovan, E. G., Oleynick, V. C., & Maruskin, L. A. (2014). The psychology of inspiration. *Social and Personality Psychology Compass, 8*(9), 495–510. https://doi.org/10.1111/spc3.12127

Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal, 45*, 1137–1148. https://doi.org/10.2307/3069429

Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology, 52*, 591–620.

Titus, P. A. (2000). Marketing and the creative problem-solving process. *Journal of Marketing Education, 22*, 225–235. https://doi.org/10.1177/0273475300223006

Tost, L. P. (2015). When, why, and how do powerholders "feel the power"? Examining the links between structural and psychological power and reviving the connection between power and responsibility. *Research in Organizational Behavior, 35*, 29–56. https://doi.org/10.1016/j.riob.2015.10.004

Tost, L. P., Gino, F., & Larrick, R. P. (2012). Power, competitiveness, and advice taking: Why the powerful don't listen. *Organizational Behavior and Human Decision Processes, 117*, 53–65. https://doi.org/10.1016/j.obhdp.2011.10.001

Tost, L. P., Gino, F., & Larrick, R. P. (2013). When power makes others speechless: The negative impact of leader power on team performance. *Academy of Management Journal, 56*, 1465–1486. https://doi.org/10.5465/amj.2011.0180

Tost, L. P., & Johnson, H. H. (2019). The prosocial side of power: How structural power over subordinates can promote social responsibility. *Organizational Behavior and Human Decision Processes, 152*, 25–46. https://doi.org/10.1016/j.obhdp.2019.04.004

Uzzi, B., Mukherjee, S., Stringer, M., & Jones, B. (2013). Atypical combinations and scientific impact. *Science, 342*(468–472).

Van der Vegt, G. S., & Janssen, O. (2003). Joint impact of interdependence and group diversity on innovation. *Journal of Management, 29*, 729–751. https://doi.org/10.1016/S0149-2063

van Dijk, H., van Engen, M. L., & van Knippenberg, D. (2012). Defying conventional wisdom: A meta-analytical examination of the differences between demographic and job-related diversity relationships with performance. *Organizational Behavior and Human Decision Processes, 119*(1), 38–53. https://doi.org/10.1016/j.obhdp.2012.06.003

van Kleef, G. A., Oveis, C., Homan, A. C., van der Löwe, I., & Keltner, D. (2015). Power gets you high: The powerful are more inspired by themselves than by others. *Social Psychological and Personality Science, 6*, 472–480. https://doi.org/10.1177/1948550614566857

van Knippenberg, D. (2017). Team innovation. *Annual Review of Organizational Psychology and Organizational Behavior, 4*, 211–233. https://doi.org/10.1146/annurev-orgpsych-032516-113240

van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. (2004). Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology, 89*, 1008–1022. https://doi.org/10.1037/0021-9010.89.6.1008

van Knippenberg, D., & Hirst, G. (2020). A motivational lens model of person x situation interactions in employee creativity. *Journal of Applied Psychology, 105*(10), 1129–1144. https://doi.org/10.1037/apl0000486

van Knippenberg, D., & Hoever, I. J. (2021). Team innovation and team creativity. In J. Zhou & E. Rouse (Eds.), *Handbook of research on creativity and innovation* (pp. 49–66). Edward Elgar. https://doi.org/10.4337/9781788977272.00011.

van Knippenberg, D., & Hoever, I. J. (2017). Team diversity and team creativity: A categorization-elaboration perspective. In R. Reiter-Palmon (Ed.), *Team creativity*. New York: Oxford University Press.

van Knippenberg, D., van Ginkel, W. P., & Homan, A. C. (2013). Diversity mindsets and the performance of diverse teams. *Organizational Behavior and Human Decision Processes, 121*, 183–193. https://doi.org/10.1016/j.obhdp.2013.03.003

Wang, X. F., Kim, T., & Lee, D. (2016). Cognitive diversity and team creativity: Effects of team intrinsic motivation and transformational leadership. *Journal of Business Research, 69*, 3231–3239. https://doi.org/10.1016/j.jbusres.2016.02.026

Wang, Y., Kim, S., Rafferty, A., & Sanders, K. (2020). Employee perceptions of HR practices: A critical review and future directions. *International Journal of Human Resource Management, 31*(1), 128–173. https://doi.org/10.1080/09585192.2019.1674360

Welch, L. (1946). Recombination of ideas in creative thinking. *Journal of Applied Psychology, 30*, 638–643. https://doi.org/10.1037/h0054074

Wojciszke, B., & Struzynska-Kujalowicz, A. (2007). Power influences self-esteem. *Social Cognition, 25*(4), 472–494. https://doi.org/10.1521/soco.2007.25.4.472

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Towards a theory of creativity. *Academy of Management Review, 18*, 293–321. https://doi.org/10.2307/258761

Zhang, Z., Zyphur, M. J., & Preacher, K. J. (2009). Testing multilevel mediation using hierarchical linear models. *Organizational Research Methods, 12*(4), 695–719. https://doi.org/10.1177/1094428108327450

Zhou, J. (2003). When the presence of creative coworkers is related to creativity: Role of supervisor close monitoring, developmental feedback, and creative personality. *Journal of Applied Psychology, 88*, 413–422. https://doi.org/10.1037/0021-9010.88.3.413

Zhou, J., & Hoever, I. J. (2014). Research on workplace creativity: A review and redirection. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 333–359. https://doi.org/10.1146/annurev-orgpsych-031413-091226

Zhou, J., Wang, X. M., Bavato, D., Tasselli, S., & Wu, J. (2019). Understanding the receiving side of creativity: A multidisciplinary review and implications for management research. *Journal of Management, 45*(6), 2570–2595. https://doi.org/10.1177/0149206319827088

Zhou, Q., Hirst, G., & Shipton, H. (2012). Promoting creativity at work: The role of problem-solving demand. *Applied Psychology: An International Review, 61*, 56–80. https://doi.org/10.1111/j.1464-0597.2011.00455.x