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Power at work: Linking objective power to psychological power

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Abstract

Experimental research conducted with student participants has documented that *feeling powerful* or *powerless* (psychological power) affects outcomes with high practical relevance for organizations. However, it is unclear how results from these studies can be generalized to organizational settings in which individuals have various roles that imply more or less *objective power*. To address this gap, we present a theoretical framework to aid in the understanding of how objective power in organizations affects psychological power. We assume that stable differences in organizational rank (i.e., structural power) determine the likelihood of interactions with superiors, subordinates, or peers. These interactions give rise to within-person variation in situational power which should lead to dynamic fluctuations of psychological power and eventually its outcomes. Results of a preregistered experiment ($n = 190$ participants) and a preregistered experience sampling study ($n = 129$ participants) conducted with working adults support our key predictions: Structural power was associated with the likelihood of being in a high power versus low power situation. Within-person differences in situational power were related to feelings of power such as judgments about (1) one's own ability to influence others in a given social situation (i.e., interpersonal power) and (2) one's own competence, agency, autonomy, and independence (i.e., personal power).

1 | INTRODUCTION

Feelings of power affect many outcomes with high practical relevance for organizations. For example, reviews of experimental social psychological research suggest that feeling powerful affects self-control, goal pursuit, and advice-taking (Galinsky et al., 2012, 2015; Guinote, 2017). These outcomes play a central role in organizational life (Galinsky et al., 2011), but little is known about how feelings of power come about outside the social psychological laboratory. Thus, it is unclear how results from these studies can be generalized to organizational settings in which individuals have various roles that imply more or less *objective power* (Khademi et al., 2021). To address this gap, we present a theoretical framework to aid in the understanding of how objective power in organizations (i.e., objectively demonstrable control of valued resources tied to a stable hierarchical position in the organizational structure; cf. Tost, 2015), affects psychological power (i.e., the self-assessments of one's own capability to influence others and one's own agency, competence, and independence from others) with its various downstream consequences on outcomes. Power researchers implicitly assume real-world power to have effects on outcomes similar to the ones we know from laboratory research. However, to allow for more confidence in this assumption, it is necessary to first understand how

feelings of power, the assumed antecedent of power's effects, arise in the wild. We theorize and test the proposed links between objective and psychological power based on an online study and an experience-sampling study conducted with adults working in organizations.

We suggest that the missing link between objective power in organizational settings and manipulations of power in social psychology experiments is the perspective of *relational power*, meaning that power is derived through one's relationships with others (e.g., Dahl, 1957; Emerson, 1962; Fiske, 1993; Langner & Keltner, 2008; Schmid Mast, 2010; Wolfe & McGinn, 2005). This established relational definition informs our definition of situational power. It implies (1) that the *difference* in power between the parties in a *specific relationship* matters and (2) that power is likely to vary across situations with different interaction partners (Schmid Mast, 2010). However, we do not want to equate situational and relational power.

To examine fluctuations in power over time and as a function of the relative power position of the involved parties, within-person designs are necessary. Whereas participants in typical social psychology studies take on either high power roles (i.e., similar to managers) or low power roles (i.e., similar to assistants), managers and assistants in organizations change between high power and low power positions depending on their respective interaction partners (Leikas et al., 2013; Schmid Mast, 2010). Accordingly, even a manager can feel low power when dealing with the CEO and an assistant can feel high power when delegating a task to an intern or introducing a new employee to the work routines. Thus, to understand power as it unfolds in organizations, it is important to acknowledge that power is context-dependent and to adopt an empirical strategy that allows to investigate these context-dependent within-person changes of power. In conducting studies that compare participants in high-power, low-power, and sometimes control conditions in one-shot experimental designs, the major part of the empirical power research fails to take the two aforementioned properties of relative power into account.

Another challenge to the generalizability of social psychological power research is that experimentally assigned (objective) power differs considerably from having objective power in real (organizational) life (Schaerer, Lee, et al., 2018) in yet another regard: real-world power is consequential and this likely changes the psychological experience of power (Khademi et al., 2021). Organizational power usually implies being held accountable, making decisions that are meaningful for subordinates (e.g., wages, promotions, holidays), and having to face the affected people again. In contrast, experimental power in its default version has typically no real consequences. Manipulations of power range from the predominantly used experiential priming (i.e., asking participants to recall a situation in which they had power, Galinsky et al., 2003), to less frequently used role-play manipulations involving both imagined (e.g., Overbeck & Park, 2001, 2006) and real interaction partners (e.g., Gonzaga et al., 2008; Schmid Mast et al., 2009). With regard to experiential priming, multiple concerns have already been raised such as its creation of demand effects (Sturm & Antonakis, 2015), its inability to reliably produce differences in psychological power (Heller & Ullrich, 2017) and its potential confounding with competition (Tost, 2015). Yet, even with more realistic role-play manipulations, the consequentiality of power is lacking as strangers interact once in an artificial setting without being embedded in a more comprehensive hierarchical structure. Thus, far from being readily generalizable to organizational realities, results from laboratory experiments might be explained by people's lay theories about power (Belmi & Laurin, 2016; Ten Brinke & Keltner, 2022), or a different interpretation of power in these different settings (Khademi et al., 2021; Sassenberg et al., 2014; Wang & Sun, 2016).

Our paper extends previous power research in that it explicitly focuses on within-person power changes in the organizational context. Previous studies on power outside the laboratory have collapsed data about interactions with romantic partners, family, friends, coworkers, supervisors, classmates, instructors, acquaintances, and strangers (Columbus et al., 2021; Foulk et al., 2018; Molho et al., 2020; Smith & Hofmann, 2016). We, however, explicitly focus on interactions at the workplace which provides us with specific insights on this very relevant context and allows us to easily define and comparably operationalize objective power (e.g., how can one compare the power a mother has over her children to the power a superior has over his subordinate?). There have also been a few experimental attempts to investigate how the same person acts in and experiences various power roles (Barends et al., 2019; Goodwin et al., 2000; Li et al., 2016; Sivanathan et al., 2008; Weick et al., 2017; Study 2). We complement these studies by increasing external validity (e.g., real consequences for both parties, interaction partners are most of the time not strangers).

This paper is structured as follows: Given the ongoing discussions about the definition of power and its components (e.g., Gaski, 2020; Sturm & Antonakis, 2015), we start by delineating five components of power that are relevant for organizational realities. Then we discuss how our theoretical framework for understanding the link between objective power and psychological power extends and refines previous research. Finally, we provide initial empirical evidence supporting our framework.

1.1 | Components of power

Power is often defined as the ability to influence others' behavior due to asymmetrical control over valued resources (e.g., Fiske & Dépret, 1996; Keltner et al., 2003; Sturm & Antonakis, 2015; Thibaut & Kelley, 1959). However, this definition is too broad to be useful in comparing or integrating findings on the effects of power in laboratory and organizational settings. Therefore, we clarify in the following our usage of five more specific concepts that can be subsumed under the broad concept of power (see Table 1 for an overview).

Please meet Peter: Peter is a partner in a multinational consulting firm and leads a team of 10 people, junior and senior consultants, analysts, and an assistant. His position objectively entails a fair amount of power, for example, authority with regard to the assignment of tasks, distribution of bonuses, and resource allocation. This objectively demonstrable control of valued resources is referred to as *structural power* (Tost, 2015). Structural power describes differences in the objectively demonstrable control of resources

TABLE 1 Power components, definitions, and examples

Category		Concept	Definition	Examples
Objective power		Structural power	Objectively demonstrable control of valued resources (Tost, 2015) tied to a stable hierarchical position in the organizational structure. Rather stable between-person difference variable.	Managerial authority, being in charge of decisions about wages, bonuses, and promotions, span of control.
		Situational power	Superiority of one's own or the other's stable hierarchical position within a specific social interaction of two or more individuals. Context-dependent and thus highly variable within-person.	A works in a team with B and C that is supervised by D. When A interacts with D, A is in the subordinate role and D in the superior role. When A interacts with B, both are in a peer role, that is, on the same hierarchical level.
Psychological power (subjective power)	State power	Interpersonal power	Conscious, fact-based but subjective judgment about one's own ability to influence others in a given social situation (cf. Anderson et al., 2012). Context-dependent.	I can reward and/or punish the other to a greater extent than the other way around. "I can get him/her/them to do what I want" (Anderson et al., 2012).
		Personal power	Conscious subjective judgment about one's own competence, agency, autonomy, and independence (Lammers et al., 2009; Overbeck & Park, 2001; van Dijke & Poppe, 2006). Context-dependent.	I can impact on things in my environment. I can do things or make decisions without another person being able to interfere. "I had the feeling that I was independent from other people" (Lammers et al., 2016).
	Trait power	Trait sense of power	Context-independent, generalized perception of one's competence and agency (cf. Anderson et al., 2012).	"If I want to, I get to make the decisions" (Anderson et al., 2012).

from a between-person perspective (e.g., being the CEO or a middle manager in a company).

However, as our team leader Peter interacts with people on different hierarchical levels throughout his working day—his same-level colleague Catherine from another team, his assistant Tom and the managing director of his firm—differences in the objectively demonstrable control of resources also need to be considered on the within-person level. We use the term *situational power* to refer to the power a person has in a given social interaction. Peter can be the high-power person when interacting with the new intern and he can be the low-power person when interacting with a member of the board of directors. His power changes as a consequence of his and the interaction partner's level in the organizational hierarchy. Taken together, we use these two related concepts (i.e., structural and situational power) to refer to the *objective* state of having more or less power.

In contrast to objective power, the subjective types of power which we call *psychological power* describe the subjective feeling of power which is assumed to be a precursor to several important outcomes such as executive functioning, stereotyping, morality, and goal pursuit (Galinsky et al., 2015). Psychological power can be experienced as *state power* in a given moment in a given social interaction or as a more context-independent, generalized perception of one's competence and agency, *trait power* (Anderson et al., 2012).

We distinguish between two components of state psychological power: interpersonal power and personal power. *Interpersonal power* describes a conscious judgment about one's own ability to influence others in a given social situation (Anderson et al., 2012). Interpersonal power resembles to what is known as social power in the literature; however, we will use the term interpersonal power in our reasoning to avoid confusion. It is based on a rather cognitive evaluation of the relative levels of influence between the people within the power relationship resulting from situational power. *Personal power* is a conscious judgment about one's own competence, agency, autonomy, and independence (cf. Lammers et al., 2009; Overbeck & Park, 2001; van Dijke & Poppe, 2006) in a given situation with a given interaction partner.

There are at least two reasons for investigating interpersonal and personal power as two separate constructs instead of collapsing them into state power. First, interpersonal and personal power affect outcomes differently. For instance, in a study by Overbeck and Park (2001), personal power was unaffected by a manipulation of social power (corresponding to interpersonal power here), and did neither predict the outcome (social judgment) nor moderate the effects of social power. Lammers et al. (2009) demonstrated that social (interpersonal) power and personal power had opposite effects on stereotyping, but parallel effects on behavioral approach (but see discussion in Lammers & Stoker, 2019; and Mayiwar & Lai, 2019). Second, studies have shown that people value personal and social (interpersonal) power differently. For instance, van Dijke and Poppe (2006) showed that people attempt to change the power difference to their advantage by decreasing their dependence on other's power to increase their personal power. No evidence was found for strivings

to increase social power. Lammers et al. (2016) demonstrated in experimental and correlational designs that people strive for power in the sense of autonomy (i.e., personal power) but not for power in the sense of controlling others (i.e., social/interpersonal power). Finally, Leach et al. (2017) set out to investigate the relationship between social (interpersonal) and personal power. Their results suggested that the association between social (interpersonal) and personal power varies across the power spectrum and weakens with increasing levels of power.

At this point, another distinction that has already been mentioned should be emphasized explicitly: the degree of context-dependency of the introduced constructs. We assume that both on the levels of objective and subjective power there are constructs with a clear contextual reference such as situational power, personal and interpersonal power as well as there are constructs that are not that strongly bound to a specific situation such as structural power and the trait sense of power.

We use the term *trait sense of power* to refer to a rather stable, generalized feeling of power. As such, the trait sense of power is related to the personal sense of power concept described by Anderson et al. (2012) as "the perception of one's ability to influence another person or other people" (p. 316). Anderson and colleagues place emphasis on the relational nature of power which means that power is specific to a certain power relationship. However, they still expected and showed the personal sense of power to be moderately consistent across different power relationships. Hence, the gist of the personal sense of power likely is feelings of agency, internal locus of control, and competence as these result from aggregating various prior experiences of psychological power in different settings. To avoid confusion, we use the term trait sense of power to refer to a context-independent, generalized perception of one's competence and agency.

However, we will not use the personal sense of power scale by Anderson et al. (2012) in our studies as the scale mixes items that we would declare as measuring interpersonal and personal power. For instance, "I can get him/her/them to do what I want" is very close to what we conceptualize as interpersonal power, whereas "If I want to, I get to make the decisions" is closer to our definition of personal power. To avoid confusion in our theoretical rationale and also in the view of our study participants, we borrowed the idea of a context-independent generalized perception of one's own power from Anderson et al. (2012) but operationalize it by means of the core self-evaluations scale by Judge et al. (1997), that focuses on the "power to" component in that participants rate their effectiveness, competence, and agency.

Table 1 summarizes the presented definitions and gives examples. In summary, we propose a distinction between objective and psychological (or subjective) power. Objective power comprises structural power and situational power; whereby structural power describes the objectively demonstrable control of valued resources tied to a stable hierarchical position within an organization, that is, when considered in a specific interaction, referred to as situational power. Psychological power describes the self-assessments of one's power, either in a context-dependent way in form of interpersonal and personal power, or in a context-independent way, referred to as trait sense of power.

1.2 | Linking objective power to psychological power

The two currently most prominent power theories, the approach/inhibition theory (Keltner et al., 2003) and the social distance theory (Magee & Smith, 2013) do not address how objective power is translated into the *psychological experience of power* (i.e., psychological power). Only the theoretical framework by Tost (2015) addresses this link. She suggests that objective power could manifest psychologically in two forms. The first psychological manifestation is the conscious sense of power, namely "one's evaluation of the extent to which one has the ability to influence others" (Tost, 2015; p. 35), which corresponds to interpersonal power in our framework. The second is the mostly subconscious *cognitive network of power* (also referred to as "power mindset") that consists of learned associations between power and various cognitive, affective, and behavioral tendencies.

We extend Tost's framework as follows. We propose that situational power, namely the interaction-specific distribution of structural power, is the link between stable structural power on the between-person level as expressed by a position in an organizational chart and sense of power as psychological representation of power. This additional step is necessary to accommodate the fact that power in real-world (organizational) settings is dynamic in the sense that a given person is likely to experience variation in structural power throughout the day. For instance, members of the middle management are subordinates when interacting with their bosses, but they are superiors when interacting with their subordinates. This idea is consistent with the interpersonal power and behavior model (Schmid Mast, 2010) advancing the view that it is not the absolute structural power position per se that affects psychological power but rather the perceived *relative* power of the interaction partner (i.e., higher or lower than the own).

Our assumptions regarding the relations between the power components are presented in Figure 1. The key assumption linking objective power to psychological power is that structural power should affect the probability to have a certain situation-specific power role in interactions (superior, peer, subordinate, i.e., situational power). In spite of the trend toward agile forms of work (e.g., Beck et al., 2001) in which roles define responsibilities in self-organized teams apart from formal hierarchical structures, the still widespread organization structure clusters people and tasks in divisions, units, and teams, organizes the number of levels in the hierarchy and defines the span of control of managers. Thereby, it determines formal relations and reporting in an organization—that is, structural power. No matter how steep or flat an organization structure is built, with regard to the distribution of organization members on hierarchical levels it usually has a rather pyramidal shape, that is, there are more employees than middle managers than top managers.

Given the typical responsibilities of hierarchical levels and the mere distribution of affiliations to hierarchical levels (i.e., employee and top manager), the relationship between structural and situational power should present itself to be as follows: Individuals in a high structural power position, such as a CEO or members of the advisory

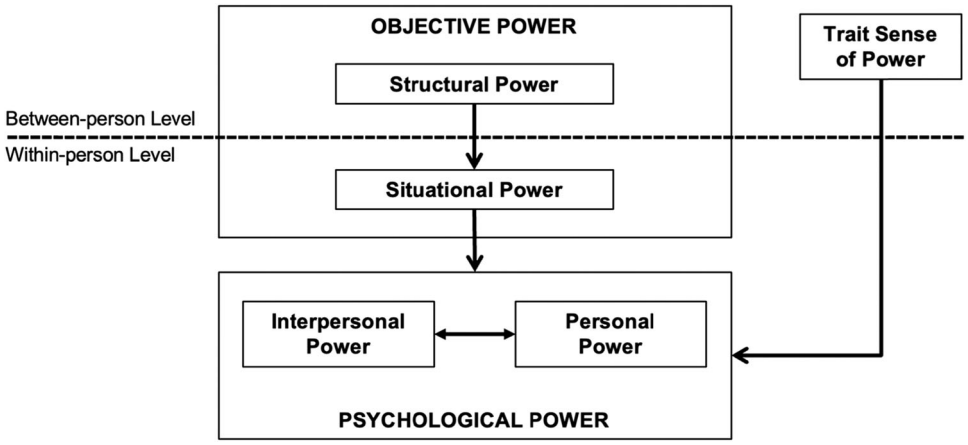

FIGURE 1 Theoretical framework linking objective power to psychological power

board, interact mostly with people who have less influence and resources. Accordingly, these individuals should often find themselves in a superior role and have high situational power. Individuals in a low power position, for example, clerks, mostly interact with people who have equal or more influence and resources than they do. Hence, these individuals should often find themselves in a subordinate role and have low situational power.

In the self-assessment of one's position in the respective situation, this experience of high or low situational power should translate into reports of high or low interpersonal power. People situated in the middle level of an organizational hierarchy frequently switch between superior and subordinate interaction partners. Therefore, they will probably change between states of higher and lower situational power and hence report at times higher interpersonal power and lower interpersonal power at other times. When asked to make a global self-assessment, these people are likely to report a sense of middle power (cf. Anicich & Hirsh, 2017).

Individuals in positions of high situational power should often experience that others comply with their wishes. Accordingly, they are likely to feel agentic, competent, and autonomous which should also result in reports of high personal power. Moreover, we suppose that the trait sense of power predicts state power independently from structural power such that people with a higher trait sense of power report higher levels of state power (i.e., interpersonal and personal power; cf. Smith & Hofmann, 2016).

Based on the above-presented rationale, we test the following hypotheses in two studies. As, by design, not all hypotheses can be tested in both studies, we state in parentheses in which of our studies we do so.

Hypothesis 1. *Structural hierarchical positions* (*i.e.*, *structural power*) *determine the probability to have a certain situation-specific power role in interactions* (*superior*, *peer*, *subordinate; i.e.*, *situational power*) *such that*, *for instance*, *top managers have in interactions more often high situational power than employees or members of the lower management* (*Study* 2).

Hypothesis 2. *When interacting with a subordinate* (*i.e.*, *situational power*), *an individual will experience higher psychological power* (*i.e.*, *interpersonal and personal power*) *than when interacting with peers or superiors* (*Studies* 1 *and* 2).

Hypothesis 3. *Individuals with a higher trait sense of power report higher levels of state power*, *that is*, *interpersonal and personal power* (*Study* 2).

1.3 | Present research

We conducted two studies to examine the link between objective power and psychological power in workplace settings. As detailed above, we assume that it is not the stable hierarchical position per se which determines psychological power, but the power of one person in relation to another in a given situation (i.e., situational power). Thus, both studies focus on relations between situational power and various components of psychological power. In a novel within-person experimental design, working adults participating in Study 1 were asked to imagine themselves in a workplace interaction with a subordinate, a peer, or a superior, and to answer questions on the thoughts, feelings, and behavior they would be likely to have. In Study 2, an experience sampling study, participants reported their current state after meaningful interactions with other people in different hierarchical positions at their workplace.

The two studies were originally designed to investigate the relations between power and various components of self-control which are not relevant for the purpose of the present paper. For this reason, we deviate to some extent from the hypotheses and analyses indicated in the preregistrations mentioned below. Importantly, we still follow the preregistrations with regard to data collection and operationalization and are transparent about data not reported in the present paper.

2 | STUDY 1

In this study, we manipulated situational power by instructing participants to imagine interactions in different roles (i.e., with subordinates, peers, or superiors), and measured the components of psychological power as well as the sense of responsibility[1]. To inform Study 2, we also asked our participants how often the role changes they imagined as per our instructions would actually occur at their workplace.

2.1 | Method

The preregistration of this study can be accessed via https://osf.io/cgu47/. Materials can be accessed via https://osf.io/f9wxa. Data and analysis script can be accessed via https://osf.io/8tqyd/.

2.1.1 | Sample

We recruited as many working adults as possible between November 10 and December 7, 2017 via personal contacts, various mailing lists, and electronic bulletin boards, to take part in an online study on role changes in the workplace. In total, 316 individuals gave their consent to participate, of which 123 individuals had to be excluded for providing incomplete data. Additionally, following the preregistration, we excluded three individuals who provided the same response on all of our main measures.

The final sample consisted of 190 German-speaking individuals from Switzerland and Germany (114 female, 76 male; 5 in top management, 20 in middle management, 22 in lower management, 60 experienced employees who temporarily take on the lead or act as a role model, 83 employees without managerial responsibilities) in the age range between 19 and 63 years (M_{age} = 32.85, SD = 12.08) who reported Md = 38.5 (range: 2–60) working hours per week in their main jobs. As compensation, participants could win one of six vouchers for various online stores, worth 20 EUR/Swiss Francs each (approximately 23.50 USD).

2.1.2 | Situational power manipulation

Participants were asked to imagine themselves in different roles at their workplace and to indicate how they would typically feel and act in each situation. Roles were manipulated by referring to workplace interactions with different interaction partners, that is, people at the same, higher, or lower hierarchical level (corresponding to baseline, low, and high situational power, respectively). All measures were presented side by side in three columns with the column header indicating the type of role the participant was asked to assume while responding to the measures.

2.1.3 | Measures

Items were formulated based on the construct definitions (cf. Table 1) and pretested in a pilot study. For all items, participants indicated their agreement using a scale from 1 (not at all) to 5 (completely). There was always a reference to "the people mentioned" in the item stem. These people were either "people above me in the organizational hierarchy," "people on my level in the organizational hierarchy," and "people below me in the organizational hierarchy."

Interpersonal power was measured with the following three items: "If I imagine interacting with the people mentioned below, I would…" (1) "control the resources (e.g., time, money, information) the other person needs," (2) "be able to punish or reward the other person," (3) "get the other person to do what I want." Cronbach's alpha was 0.32 in the high power condition, 0.27 in the peer condition and 0.39 in the low power condition.[2]

Personal power was measured with the following three items: "If I imagine interacting with the people mentioned below, I would…" (1) "have the feeling that I have influence over things in my environment," (2) "have the feeling that I can do my work in a self-determined way," and (3) "have the feeling that I can do things or make decisions that others cannot interfere with or change." Cronbach's alpha was 0.60 in the high power condition, 0.44 in the peer condition and 0.54 in the low power condition.

Other measures. Participants also provided information on how often they changed from one hierarchical role to another the day before and the week before. When answering these questions, participants referred to the following roles: lower-ranking coworker (staff, intern…), higher-ranking coworker (team leader, boss), coworker on the same hierarchical level, client/customer, and retailer/supplier/service provider. We explained that participants should consider interaction situations that fit the following three criteria: The interaction should (1) not be purely private, that is, it should be at least partially about work, (2) take place in real-time (i.e., face-to-face, over the phone, by messenger), and (3) have a certain significance (i.e., greetings or brief small talk were of no interest).

2.2 | Results

In a first step, we performed confirmatory factor analyses using the R package lavaan (Rosseel, 2012) to test whether our measures would reflect the two postulated psychological power components—interpersonal power and personal power—in each of the three power roles. We estimated a model with six factors (i.e., each construct for each of the three power roles), constraining the loadings across roles to be equal, but allowing for correlations between the residuals of identical items across different power roles. This model yielded a good fit, $X^2(110) = 155.4$; $p < 0.003$; CFI = 0.96; RMSEA = 0.05,

BIC = 9231.58. We also estimated an equivalent model with three factors (i.e., psychological power based on the items intended to measure interpersonal and personal power for each of the three power roles), which also resulted in a good fit $X^2(124) = 178.4$; $p < 0.001$; CFI = 0.95; RMSEA = 0.05, BIC = 9183.8. The X^2-difference-test failed to reach significance, which means we should stick with the smaller 3-factorial model. Accordingly, we report in the following the results for psychological power.[3]

In line with Hypothesis 2, participants reported more psychological power in the high power role than in the low power role, $t(189) = 17.24$, $p < 0.001$, $d = 1.53$. We made no prediction regarding the peer situation but found the ratings of psychological power to be at an intermediate level between the ratings for high power and low power positions (Table 2).

2.2.1 | How often do people experience role changes at their workplace?

Most participants were familiar with changes in situational power at their workplace: 139 out of 190 participants (73%) reported at least one power role change at work the day before (Max = 120, $M = 7.32$, Md = 4, $SD = 11.6$). For the preceding week, 82% of participants reported at least one role change (Max = 500, $M = 26.5$, $Md = 15$, $SD = 47.79$). Figure 2 indicates that participants on all hierarchical levels experienced role changes quite frequently, with participants in lower or middle management tending to report more role changes than non-management members. Additionally, Table 3 suggests that people who are older and work more hours per week are more likely to experience hierarchical role changes.

2.3 | Discussion

The results of Study 1 support our model of the link between objective power and psychological power. When participants imagined workplace interactions in different roles, they reported different levels of psychological power. Psychological power was highest when participants imagined interactions with subordinates, intermediate in peer interactions, and lowest in interactions with superiors. Study 1 also revealed that changes in situational power may occur quite frequently in actual organizational settings. This led us to examine these changes in situational power using a more direct method in Study 2.

Despite some similarities to research that we criticized in the Introduction, the present research overcomes some of the limitations of previous research. The main point of our criticism was that a majority of previous experimental power (priming) research lacks a reference to the organizational context. We addressed this issue by (1) inviting only people with working experience to take part in our study and (2) by asking people to think exclusively about workplace situations. Still, we acknowledge that the use of the priming method and a within-subject design may lead to demand effects. Therefore, we used a different paradigm in Study 2.

3 | STUDY 2

In Study 2, we examined the link between objective power and psychological power using experience sampling methodology. Assessing changes in situational power as they occur in the daily lives of employees allows us to minimize recall bias and use of heuristics and to unconfound within- and between-person processes.

3.1 | Method

The preregistration of this study can be accessed via https://osf.io/cbxhq. Materials can be accessed via https://osf.io/h64wy. Data and analysis script can be accessed via https://osf.io/8tqyd/.

3.1.1 | Sample

Participants were recruited via personal contacts, various mailing lists and electronic bulletin boards, university alumni organizations, several professional organizations, and by distributing flyers. We recruited 129 participants (69 women, 60 men, $M_{age} = 39.96$, $SD_{age} = 12.01$, range: 23–63 years) working for different organizations. Among them, six had a position in top management, 22 in middle management, 20 in lower management, 46 were experienced employees, 21 were employees, and 14 did not find a suitable category to describe their position. The majority had at least a university or polytechnic degree (70%) and worked full time (68%). Our inclusion criteria were the following: Participants had to (1) be German-speaking, (2) possess and use a smartphone with Internet access, (3) be employed (not self-employed, retired or seeking employment), (4) have a certain amount of latitude with regard to the temporal organization of the own work, (5) work maximum 1 day per week from home, (6) work for an organization with at least five employees at their site, and (7) to have no psychological problems such as for example, depression, or burnout.

TABLE 2 Means (standard deviations) of psychological power

	Situational power					
Dependent variable	Low power role		Peer role		High power role	
Psychological power	2.61_a	(0.64)	3.14_b	(0.56)	3.59_c	(0.65)

Note: Within rows, conditions with different subscripts differ with at least $p < 0.05$.

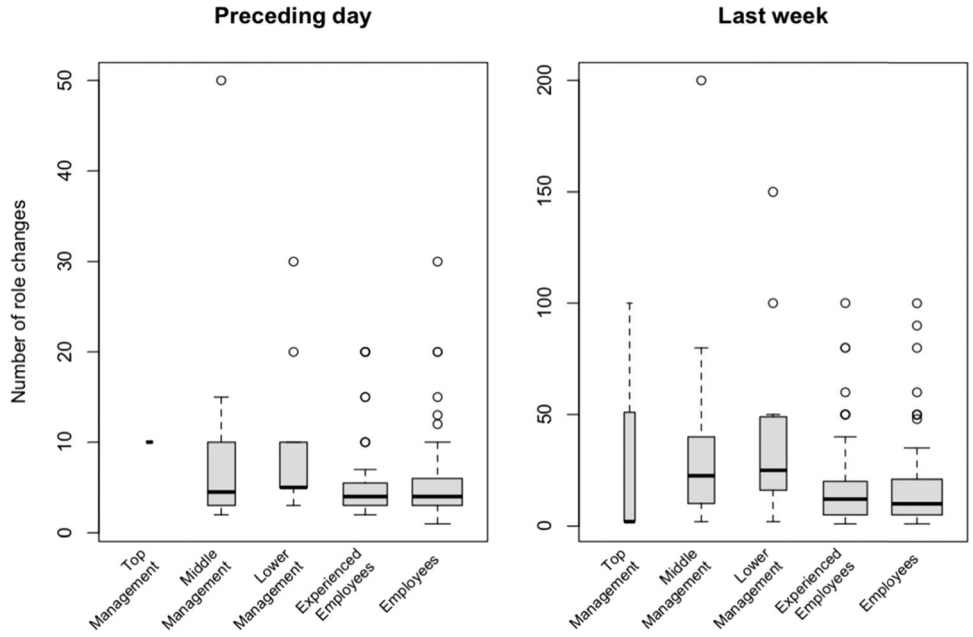

FIGURE 2 Number of role changes split by hierarchical position. The width of boxes is proportional to the sample size. For ease of inspection, we excluded one participant who indicated 500 role changes.

TABLE 3 Correlations between the number of role changes and participants' background information

	No of changes yesterday	No of changes last week	No of direct reports	No of coworkers in department	Working hours	Female
No of changes last week	0.96***					
No of direct reports	0.08	0.11				
No of coworkers in department	−0.02	0.05	0.21*			
Working hours	0.03	0.14+	0.17+	0.20		
Female	−0.06	−0.12	−0.01	−0.01	−0.20**	
Age	0.24**	0.24**	0.13	0.01	0.11	0.08

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; +$p < 0.10$.

Our data initially encompassed 1649 observations. We excluded observations that (1) were reported between 10 p.m. and 5 a.m. (2.8%) because it is unlikely that participants actually experienced work-related interactions within these times and (2) included only an answer to the very first question of the questionnaire (1.6%). Our final sample comprised 1577 observations from 129 participants. Among all observations, 18% referred to high power situations, 30% to equal power situations, 25% to low power situations, 16% to interactions with customers, 4% to interactions with suppliers, and 7% to other kinds of interactions. Our analyses are based solely on observations ($n = 1139$) referring to interactions with subordinates (=high power situations), peers (=equal power situations) and superiors (=low power situations), resulting in $M = 8.83$ observations per participant ($Md = 8$, $SD = 4.79$, range 1–21). Viewed differently, 15% of participants experienced only one kind of three possible interactions, 45% experienced two kinds of interactions and 41% experienced all three kinds of interactions.

The sample size was determined based on a temporal criterion. Namely, we collected data from as many participants as we were able to recruit between March 12 and November 30, 2018. As exact power analyses for multilevel designs depend on several unknown quantities, we performed a simpler post hoc analysis as described by Ketturat et al. (2016): The power of detecting within-person effects can be approximated by the power of a correlation test with a sample size that equals the number of participants (e.g., 129) times the number of observations per participant minus 1 (e.g., 8 – 1 = 7). Accordingly, our sample size affords at least 85% statistical power to detect a within-person effect of $r > 0.1$ assuming two-sided testing.

As compensation, participants received individual feedback on their work stress and health behavior during the experience sampling period and entered a price draw for five vouchers worth 50 CHF (~52 USD). Participants completing more than 10 experience-

sampling questionnaires also entered a prize draw for an iPad Pro Wi-Fi 11, 64GB worth 899 CHF (~905 USD).

3.1.2 | Procedure

The study consisted of three elements: First, we administered an initial questionnaire that contained questions concerning personality traits, professional situation, demographic information, and our inclusion criteria.

Second, participants took part in an experience sampling phase for five (if possible consecutive) working days. Each morning at 7 a.m. participants received an e-mail with two individualized links to a short questionnaire and the evening questionnaire. In this phase, they were instructed to answer the short questionnaire directly after experiencing an interaction with at least one other person that was at least partially about work, took place in real-time (i.e., face-to-face, over the phone, by messenger), and had a certain significance (i.e., not just a greeting). In the short questionnaire, participants indicated the role of the interaction partner they had focused on in this interaction (i.e., situational power). Then, participants answered the questions on interpersonal power and personal power. Unrelated to the present research, they also rated the extent to which they would be able to exert self-control and whether they needed to do so. Finally, participants indicated how stressed they were at the moment and how well they felt able to cope.

Third, after work, we asked participants to answer questions concerning self-control unrelated to the present research. The evening questionnaire also contained most of the information needed for the individual feedback. The order of topics covered in the short questionnaire and the evening questionnaire remained the same during the experience sampling phase, while the order of items within the topics was randomized.

3.1.3 | Measures

Given the time-intensive nature of experience sampling studies, we used again very short measures of our focal constructs. The items were similar to the ones in Study 1 but slightly reworded to improve reliability and adapted to fit the experience sampling purpose.

Situational power

Participants reported with whom they had interacted: a subordinate colleague, a colleague on the same hierarchical level, their superior, another superior colleague, a customer, a supplier, or none of the above.

Interpersonal power

Participants answered the following three questions on a scale ranging from 1 (the other person does) to 5 (I do): "Who currently controls more resources (e.g., time, money, information), on which the other is dependent?" "Who is currently in more of a position to make the other do certain things?" and "Who is currently in more of a position to reward and/or punish the other?" Cronbach's alpha was 0.86.

Personal power

Participants indicated the extent to which they agreed with the following two items using a scale ranging from 1 (not at all) to 5 (completely): "I currently feel like I have influence over things in my environment" and "I currently feel like I can do things or make decisions that others cannot interfere with or change." Cronbach's alpha was 0.65.

Trait sense of power

As part of the initial questionnaire, we measured participants' fundamental appraisal of their effectiveness and capability as a person as a proxy of trait sense of power using the core self-evaluations scale by Judge et al. (1997). Cronbach's alpha was 0.79.

We did not use the personal sense of power scale by Anderson et al. (2012) because the description of power as influence used in the items is not clear about the distinction between "power to" or "power over." We wanted the trait sense of power in our model to unambiguously refer to "power to" (see introduction of the concept trait sense of power in the components of power section). Using an independent sample (n = 120, 106 women, 12 men, 1 diverse gender, M_{age} = 25.44, SD_{age} = 8.51) we found a correlation of r = 0.51, $t(118)$ = 6.52, p < 0.001, between the core selfevaluations scale and the personal sense of power scale.

Structural power

Participants indicated as part of the initial questionnaire their position in the organizational hierarchy. They could choose between "(1) Lower nonmanagement level: employee; primary responsibility: performing the actual services of the organization (e.g., production, rendering of services)," "(2) Upper non-management level: experienced employee, considered a role model; primary responsibility: performing the actual services of the organization," "(3) Lower management: lowest executive level (e.g., team leader, master); primary responsibility: leading the employees that perform the actual services of the organization," "(4) Middle management: medium executive level (e.g., area manager, department manager); primary responsibility: implementation of the top management's landmark decisions in their department," "(5) Top management: highest executive level of the organization (e.g., director, board of directors); primary responsibility: development and implementation of the organizational strategy," or "(6) Classification into the above levels is not possible."

3.2 | Results

Based on the results of Study 1, items for personal and interpersonal power were combined into a single psychological power scale. The pattern of results was identical for both personal and interpersonal power.[4]

Multilevel modeling was used to account for the nested data structure resulting from repeated measurements. As a first test, we verified that there was sufficient within-person variability to support multilevel analyses (see Table 4) in psychological power. The only experience sampling study within the power literature that we are aware of concluded that 58% of the variance in psychological power represented situational fluctuations (Smith & Hofmann, 2016). In our study, we found that 66% of the variance in psychological power was due to situational fluctuation. This underlines the importance of studying power not only as a between-person difference variable, as is common in experimental power literature, but also as a variable that varies substantially within-person.

Table 5 shows the descriptives and correlations for all study variables, Table 6 presents the descriptives for the three kinds of power situations. In line with our expectations and the results of Study 1, psychological power was lowest when participants reported to have low situational power and highest when they were high in situational power.

3.2.1 | Relations between power components

According to our model (see Figure 1) structural power would only be indirectly related to psychological power because it determines the probability to have interactions in a certain situation-specific power role (i.e., situational power). Table 7 presents an overview on the proportions of low power, peer, and high power interactions for each level of structural power. A chi-square test indicated that structural and situational power were related, $X^2(8) = 283.0$, $p < 0.001$. In line with our expectations (cf. Hypothesis 1), top managers mostly reported being in high power positions, members of the middle and lower management reported being in all three kinds of situational power positions, and employees mostly reported interacting with peers and superiors.

To examine the relations between the components of power more systematically, we conducted a series of multilevel regressions in which we regressed psychological power on trait power, structural power, and situational power (see Table 8). Analyses were performed using the R packages lme4 (Bates et al., 2015) and lmerTest (Kuznetsova et al., 2017). For the variable "situational power," we used two dummy variables "high power" and "low power" with 0 coding for interactions with peers. All Level 1 variables were centered around the person-specific mean and the person-specific means were used as Level 2 to explore possible between-person effects (e.g., Hoffman & Stawski, 2009). We started with a random intercept model for all models and subsequently tested the adequacy of adding random slopes using the Bayesian Information Criterion (BIC). All reported multilevel model estimates are unstandardized.

TABLE 4 Percentage of within-individual and between-individuals variance in psychological power

Construct	Within-individual variance (e^2)	Between-individuals variance (r^2)	Proportion of within-individual variance
Psychological power	0.45	0.24	66%

Note: Given that our measurement occasions are nested within individuals, we first specified a null model to calculate the percentage of within-individual variance for the repeated measures variable. The percentage of variance within-individuals was calculated as $e^2/(e^2 + r^2)$.

TABLE 5 Descriptive statistics and correlations among study variables

Variables	*M*	*SD*	*n*	1	2	3	4
1. Low situational power	0.35	0.48	1139	-	−0.45***	−0.51***	−0.13
2. High situational power	0.24	0.43	1139	−0.41***	-	0.52***	0.17*
3. Psychological power	3.21	0.83	1126	−0.48***	0.38***	-	0.28**
4. Trait power	3.91	0.52	129	-	-	-	-

Note: Within-person correlations below the main diagonal, between-person correlations above the main diagonal. Low situational power was a dummy variable contrasting interactions with superiors (1) with all other interactions (0); High situational power was a dummy variable contrasting interactions with subordinates (1) with all other interactions. All constructs were measured on scales ranging from 1 to 5.

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

TABLE 6 Means (standard deviations) of psychological power

Dependent variable	Situational power Low power role		Peer role		High power role	
Psychological power	2.72_a	(0.05)	3.37_b	(0.09)	4.03_c	(0.09)

Note: Multilevel modeling indicated that, within rows, conditions with different subscripts differ with at least $p < 0.05$. $n = 1126$. In the model, random slopes were included.

TABLE 7 Proportions of situational power positions as a function of structural power

Situational power	Structural power				
	Top management (n = 37) (%)	Middle management (n = 173) (%)	Lower management (n = 197) (%)	Upper nonmanagement (n = 418) (%)	Lower nonmanagement (n = 196) (%)
High power positions (n = 253)	68	55	44	8	6
Peer positions (n = 408)	16	21	30	56	37
Low power positions (n = 360)	16	24	26	36	57

Note: Descriptives reported here are based on 1021 observations from 114 participants: 14 participants did not indicate their structural power, and one only reported interactions with customers that are not considered here.

TABLE 8 Variables influencing psychological power

	Fixed effects	
Parameter		
Intercept	3.37***	(0.09)
Level 1 (Measurement occasions)		
Low situational power	−0.65***	(0.05)
High situational power	0.66***	(0.08)
Level 2 (Individuals)		
Low situational power	−0.12	(0.18)
High situational power	−0.23	(0.20)
Trait sense of power	0.19*	(0.08)
Structural power	0.07	(0.05)
	Random effects	
Variance		
Intercept	0.12	(0.35)
Low situational power	0.08	(0.29)
High situational power	0.18	(0.43)
Residual	0.24	(0.49)
R^2	70.5%	

Note: For fixed effects, standard errors are in parentheses. For random effects, standard deviations are in parentheses. (Pseudo-)R^2 was calculated comparing the absolute null model without any predictor to the model presented in this table. n_{cases} = 114, $n_{observations}$ = 1008.
***p < 0.001; *p < 0.05.

In line with our postulated framework, psychological power varied as a function of situational power. Compared with peer interactions, participants reported more than a half scale-point more interpersonal power in high power roles (high situational power: b = 0.66, p < 0.001) and more than a half scale-point less interpersonal power in low power roles (low situational power: b = −0.65, p < 0.001). We were also interested in how between-person differences in power aspects would affect psychological power: Interestingly, structural power had no effect, b = 0.07, p = 0.11, which bolsters our reasoning regarding the importance of the power differences in a given situation. We assumed that the trait sense of power would predict state power independently from structural power such that people with a higher trait sense of power would report higher levels of state power. In line with this idea, trait sense of power predicted psychological power, b = 0.19, p = 0.01. Taken together, these findings support our framework.

3.3 | Discussion

Sampling experiences of interactions at work, Study 2 provided further support for our theoretical framework. Consistent with Study 1, participants reported frequent changes in the power roles they assume in interactions with workplaces colleagues.

This variation in situational power predicted their reports of psychological power. Relative to interactions with peers, participants felt more powerful when interacting with subordinates, and less so when interacting with superiors. Results of Study 2 corroborate Smith and Hofmann's (2016) finding that power varies substantially within-person in natural environments and provides evidence that this is also, and perhaps especially, true for workplace settings.

4 | GENERAL DISCUSSION

Experimental research conducted with student participants has documented that feeling powerful or feeling powerless affects outcomes that have high practical relevance for organizations such as goal pursuit, time perception, advice taking, or self-control (Galinsky et al., 2015; Guinote, 2017). However, it has so far been unclear how results from these studies can be generalized to organizational settings in which individuals have various roles that imply more or less objective power. We aimed to fill this gap by presenting a theoretical framework for understanding how objective power in organizations translates into psychological power and empirically testing its key assumptions. A major strength of our theoretical framework is that it addresses the problem of conceptual clarity with regard to the power construct (Gaski, 2020) by disaggregating it into its constituting elements (e.g., see Figure 1 and Table 1). This constitutes an important contribution: lack of conceptual clarity has previously resulted in different operationalizations that accentuate different aspects of a variety of inconsistent definitions, leading to seemingly conflicting findings as it is the case for e.g., studies investigating the effects of power on self-control (Heller & Ullrich, 2017) or interpersonal sensitivity (Bombari et al., 2013).

In support of our hypotheses, we found in a preregistered experiment and a preregistered experience sampling study with working adults that imagining or actually experiencing interactions with superiors (i.e., having low situational power) decreased participants' psychological power as compared to interactions with peers, whereas imagining interacting or actually interacting with subordinates (i.e., having high situational power) resulted in increased psychological power as compared to interactions with peers.

The present research is an important step toward broader generalizations from the social psychological power literature. For example, now that we have shown that the extent of psychological power that employees experience at work varies substantially within individuals, we may infer that consequences of power established in the laboratory (e.g., efficiency of goal pursuit; Guinote, 2007) are also likely to vary within individuals. For example, employees' goal pursuit may be more efficient after interacting with subordinates to the extent that their elevated interpersonal and personal power are sustained during the next task. If such predictions would be corroborated in future research, this would also have implications for work design as it may turn out that the timing of social interactions with colleagues from different hierarchical levels affects performance and well-being when working alone.

Our studies showed that who we interact with makes us feel more or less powerful. This might be an interesting lesson to be learned for organizational members. Every employee has probably observed that (s)he feels or acts differently in reaction to different interaction partners but might attribute these differences rather to the different personalities of the different interaction partners. The possibility that these differences could also be explained by differences in power might prove to be an interesting starting point in reflection within leadership and teambuilding seminars in organizations. Power and power differences are not carved in stone but context- (or interaction-) dependent and this self-knowledge might especially help people in the middle of organizational hierarchy to understand and deal with the different expectations and possibilities of as well as reactions to their changing power positions.

More generally, the present research demonstrates the utility of adopting a within-person perspective on power. So far, only very few studies have tested hypotheses about the effects of interpersonal power in within-person designs, be it experimental work (Goodwin et al., 2000; Li et al., 2016; Sivanathan et al., 2008; Weick et al., 2017; Study 2) or field studies (Foulk et al., 2018; Smith & Hofmann, 2016). The within-person perspective solves at least two problems of social psychological power research. First, studies on power often rely on between-subject designs and are usually statistically underpowered (Zhang & Smith, 2018). Within-designs offer a substantial boost in statistical power and require fewer participants (Charness et al., 2012). Second, most power studies do not include control conditions that would allow them to distinguish between the effects of power and the effects of powerlessness (Schaerer, du Plessis, et al., 2018). Sampling multiple interactions an individual has with different people on different hierarchical levels allows for the determination of the individual's baseline psychological power—independently of structural power. Upward or downward deviations from this individual baseline psychological power can then be interpreted as high or low power situations (cf. Leach & Weick, 2018; Study 2).

4.1 | Limitations and future directions

First, personal and interpersonal power were indistinguishable in our data. Factor analyses suggested that a two-factor solution was not superior to a one-factor solution. Moreover, patterns of mean differences across conditions were identical in both studies. Although the main purpose of our research was to demonstrate the link between objective power and psychological power, it would be desirable to tease apart potential differences between personal and interpersonal power in future research. For example, given the importance of social comparisons for self-evaluations (Festinger, 1954), it is conceivable that interpersonal power is causally before personal power. This assumption could not be tested with our study designs.

Second, we cannot rule out the possibility that the effects of situational power are confounded with effects of specific interaction partners. Participants only reported the interaction partner's role. However, the same role (i.e., peer or subordinate) can be occupied by different people with different personalities and different relationship history, which probably affects the interaction situation. For

instance, if an individual reported four interactions with subordinates in total and all four were interactions with Peter, the effects might either be effects of high power or effects of interacting with Peter. This is less of a problem if an individual's reported interactions with subordinates referred to interactions with different people. Future research in applied settings might attempt to control for the specific interaction partner. In laboratory settings, the principles of a round robin design (Warner et al., 1979) might be used in that multiple participants are scheduled to the same experimental session and all possible pairs of participants from a given set of participants interact.

Third, our framework assumes that individuals know their interaction partner's objective power. This may not always be the case, for instance in interactions between representatives of different departments (e.g., HR vs. finance) or between representatives of different organizations (e.g., project manager of firm A vs. project manager of firm B). Lacking knowledge of the interaction partner's structural power, individuals might rely on interpersonal hierarchy expectation, which would be an interesting moderator variable to look at it future research. People high in *interpersonal hierarchy expectation (IHE)* act on the assumption that dominance hierarchies are present or develop in interpersonal interactions or relationships (Schmid Mast, 2005). Based on the mechanism of self-fulfilling prophecy, hierarchy-expecting individuals might behave in line with the assumed power balance between them and another person, which in turn causes the interaction partner to behave complementarily (Tiedens & Fragale, 2003; Tiedens et al., 2007). The interaction partner's complementary behavior reinforces the (assumed) hierarchy.

The perception of situational power may also be moderated by individual differences in *role integration* and *role segmentation*, that is, the degree to which aspects of one life domain are kept separate from the other domain (Ashforth et al., 2000). For instance, a supervisor who prefers segmentation might avoid having blended meetings with both her subordinates and her boss as well as she might have clear rules about her communication style and content with her subordinates and her boss (e.g., never be on first-name terms with subordinates, never tell subordinates about her family). In contrast, a supervisor who prefers integration might address both his subordinates and his boss informally, share personal stories with his subordinates as well as his boss and prefer to attend meetings with all concerned parties regardless of their hierarchical position. Role integrators are likely not to perceive substantial differences in psychological power and accordingly the effect of interacting with different people on their behavior should be minimal while role segmentors might appear as different people as a function of their interaction partner.

Finally, not only individual differences but also situational characteristics that enhance the salience of power differences such as the organizational hierarchy climate might play a role. *Organizational climate*, the "summary perception derived from a body of interconnected experiences with organizational policies, practices and procedures and observations of what is rewarded, supported, and expected in the organization" (Schneider et al., 2017; p. 468), has a fundamental influence on organizational behavior such as job attitudes, job performance, strain, turnover intentions, and organizational citizenship behaviors (Chang et al., 2009; Wallace et al., 2016). Organizational climates might not only pertain to service, safety, justice, discrimination, and harassment (Schneider et al., 2017), but might also differ regarding the importance of hierarchy. In some organizations (or even industries: e.g., IT, Research vs. Consulting, Banking) differences in power might be very salient and actively cultivated. When working in an environment in which power differences are salient (e.g., dresscode, spatial organization, and communication rules), an individual should easily know the difference between interacting with his subordinate or her boss and this could make him/her feel and behave differently.

In addition to these psychological factors we have discussed so far, more objective characteristics of the organization might also play a role in the perception of power such as the size of the organization or the steepness of organizational hierarchy. For instance, it seems plausible that people working in larger organizations experience more role changes. Specialization and organization based on the division of labor are more common in larger organizations than in smaller ones where employees tend to be generalists. That means, people in larger organizations need to interact more with other people and change their interaction partners frequently. Not all of these role changes need to be hierarchical ones but given that the base rate of role changes increases, it is at least possible that some of these changes involve superiors or subordinates. Furthermore, this effect might be amplified by the steepness of organizational hierarchy. The probability of experiencing interactions with people below or above in organizational hierarchy increases with the number of layers in the organizational chart. To date, it is still relatively common for larger organizations to be rather hierarchically organized whereas small organizations tend to have rather flat hierarchies that entail frequent interactions with people on the same level of organizational hierarchy. These two objective factors are to a certain degree intertwined in organizational reality, but do not need to be from the perspective of theory.

Finally, future research might further explore the distinction between control or "power over" as well as autonomy or "power to" which we explore at the state psychological level. As we wanted to bridge between existing social psychological power literature and the real-world organizational context, we focused on the subjective perception of power. However, this distinction could also be interesting at the objective level. For instance, job roles differ in both their level of control (e.g., line manager without expert knowledge in particular field) and autonomy (e.g., specialist without subordinates). We considered this only insofar as we included in Study 2 only participants that reported a certain level of objective autonomy (using the work design questionnaire by Stegmann et al., 2010). However, it might complement our knowledge of the effects of power if we further investigated what "power over" and "power to" on the objective level do to the incumbents.

5 | CONCLUSION

The present research has shown that how powerful employees feel depends on who they interact with. Our results suggest that it would clearly be a mistake to assume that employees at higher

organizational ranks will always feel more powerful than employees at lower ranks. Because power is relational, it will vary from situation to situation depending on the extent to which employees control each other's resources. Our theoretical framework linking objective power to psychological power suggests many known outcomes of power are likely to vary across situations as employees interact with different colleagues. A within-person approach is necessary for examining these exciting generalizations from the lab to the field.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this manuscript are openly available in the Open Science Framework at https://doi.org/10.17605/OSF.IO/8TQYD.

ETHICS STATEMENT

The present research was done in accordance with the checklist issued by the responsible ethics committee of the Faculty of Philosophy, University of Zurich, meaning that no formal approval was needed. This study respects the Ethical Principles of Psychologists and Code of Conduct by the American Psychological Association (APA) as well as the Ethics Guidelines for Psychologists by the Swiss Psychological Society.

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ENDNOTES

[1] We felt that the number of constructs is already quite high and the results for sense of responsibility mirror the results for psychological power. Accordingly, we decided to simplify the presentation and focus on the main aspects of our model. Additional analyses regarding the sense of responsibility can be retrieved from the OSF: osf.io/upeq.5

[2] We developed these items based on definitions of social power. The low internal consistency might result from the conjunctive formulation we used in German. In Study 2 we used the same item content but formulated the items in a descriptive way and Cronbach's alpha improved substantially to 0.86.

[3] For the collapsed psychological power scale Cronbach's alpha was 0.56 in the high power condition, 0.48 in the peer condition and 0.61 in the low power condition.

[4] Cronbach's alpha for the collapsed psychological power scale is 0.75.

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