Relational Energy at Work: Implications for Job Engagement and Job Performance

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Relational Energy at Work:
Implications for Job Engagement and Job Performance

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Abstract

Energy is emerging as a topic of importance to organizations, yet we have little understanding of how energy can be useful at an interpersonal level toward achieving workplace goals. We present the results of 4 studies aimed at developing, validating, and testing the relational energy construct. In Study 1, we report qualitative insights from 64 individuals about the experience and functioning of relational energy in the workplace. Study 2 draws from 3 employee samples to conduct exploratory and confirmatory factor analyses on a measure of relational energy, differentiating relational energy from related constructs. To test the predictive validity of the new relational energy scale, Study 3 comprises data from employees rating the level of relational energy they experienced during interactions with their leaders in a health services context. Results showed that relational energy employees experienced with their leaders at Time 1 predicted job engagement at Time 2 (one month later), while controlling for the competing construct of perceived social support. Study 4 shows further differentiation of relational energy from leader-member exchange (LMX), replicates the positive relationship between relational energy (Time 1) and job engagement (Time 2), and shows that relational energy is positively associated with employee job performance (Time 3) through the mechanism of job engagement. We discuss the theoretical implications of our findings and highlight areas for future research.

Keywords: energy, job engagement, social contagion, social support, social networks, leader-member exchange, job performance.

Energy is an organizational resource that increases employees' capacity for action and motivation, enabling them to do their work and attain their goals (Quinn, Spreitzer, & Lam, 2012, p. 6).   Unfortunately, this critical organizational resource may not always be efficiently managed and may even be in decline (Loehr & Schwartz, 2003; Pfeffer, 2010). Availability of energy is highly relevant to workers and employers, as the absence of energy can result in burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), stress (Sonnentag, Kuttler, & Fritz, 2010), or disengagement (Schaufeli, Bakker, & Van Rhenen, 2009). Increasing job demands of longer work hours, continual change, technology blurring the boundaries of work and personal life, workload increases, and the risk of job loss all contribute to deteriorating energy in the workplace. As employees and organizations continually strive to do more with less, human energy in the workplace is an increasingly critical and relevant issue in organizational research.

Though firms experiment with ways to better manage and enhance worker energy (such as wellness programs, day care, flexible work schedules, or ergonomic workspaces), we know little about how workers can endogenously resource their own human energy. As organizations are, fundamentally, systems of interdependent individuals (Griffin, Neal, & Parker, 2007; Katz & Kahn, 1966), we shift focus to one relatively unexplored source of energy: other people at work.

Existing literature identifies a variety of sources of energy, such as nourishment and sleep as well as social interaction in groups (Cole, Bruch, & Vogel, 2012). It is clear that individuals can be energized by other people. Existing research suggests that people who are energized by others have higher levels of work performance (Baker, Cross, & Wooten, 2003; Cross & Parker, 2004) and knowledge transfer in organizations (Casciaro & Lobo, 2008), but the literature is hampered by conceptual ambiguity, a lack of theoretical development, and the lack of a reliable and validated measure of how this energy transfer occurs in "the space between" individuals (Bradbury & Lichtenstein, 2000, p. 551), or at an interpersonal level. Therefore, the purpose of this paper is to provide greater theoretical elaboration, conceptual clarification, and rigorous

operationalization of energy derived from a relational experience, or what we refer to as *relational energy*. In this paper, we both elaborate upon and test a theory, leading to more informed theory and conceptual clarity about the construct of relational energy.

To do so, we first review existing theory and research on human energy at work, clarifying the nomological network of relational energy and describing its unique conceptual space. We then bridge to the relational level, reporting findings from a qualitative Study 1 that provides contextual insight into the phenomenon of energy transfer within work dyads. In Study 2, we sought to develop a measure of relational energy and report on its psychometric properties by conceptually and empirically differentiating it from the related concepts of social support, relational identification, productive energy, emotional energy, and leader-member exchange (LMX). With data from two different points in time, Study 3 aims to show that relational energy predicts employee job engagement. In Study 4, we sought to replicate the positive relationship between relational energy and job engagement, and through bootstrapped mediation analyses show that relational energy is positively associated with employee job performance through the mechanism of job engagement. We conclude with a discussion of the contributions of these findings and suggestions for future research.

Theoretical Background

The concept of human energy is inherent in a variety of theories of human activity. Studies of engagement (Kahn, 1990; Rothbard, 2001), thriving (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005), and vigor (Shraga & Shirom, 2009), for example, all rely to some extent on the concept of human energy. In the workplace, energy is often considered a resource that can be applied toward the doing of work. Notably, the construct of motivation encompasses several facets of energy, capturing how individuals choose the direction in which they choose to expend their efforts, the intensity or how much energy to expend in doing so, and how long they will persist in doing so (Pinder, 2008). The degree to which one experiences aroused feelings of

vitality, vigor, and enthusiasm serves as a helpful resource, compelling feelings of motivation and ability to complete work tasks and achieve work goals.

In an overview of the energy literature and its relation to organizations, Spreitzer, Lam, and Quinn (2012) characterize the energy literature as interdisciplinary and diverse, with six disparate research streams. Five of the six streams examine energy at the individual level, where energy is considered to be physical or psychological. Some scholars refer to energy as the availability of glucose in the bloodstream that enables individuals to self-regulate behavior (e.g., Baumeister, 2002). Indeed, the predominance of empirical work and conceptual development in the management literature has focused on energy at the individual level (Cole et al., 2012; Quinn, Spreitzer, & Lam, 2012).

The sixth stream, which draws primarily from interaction ritual theory (e.g., Collins, 1993, 2004), shifts focus toward human energy in social interactions. There has been some preliminary empirical work exploring this social, interpersonal, and relational form of energy. Social network studies have measured organizational implications of network ties that are considered "energizing" or "de-energizing" (Baker, Cross, & Wooten 2003; Cross & Parker, 2004). Parker, Gerbasi, and Porath (2013) explore the destructive outcomes associated with de-energizing ties, including decreased motivation, reduced thriving, and turnover. Other research examines the interactive experience of two actors focusing on those who give (or express) rather than receive (or interpret) energy. McDaniel (2011), for example, studied relational energy from the perspective of the giver of energy. Proposing a theoretical model for the cognitive and affective factors involved in an individual's energy expression choices, McDaniel developed a self-report measure that captures an individual's perception about the appropriateness and contagion of his or her own energy expression in interdependent work relationships.

While this work focused on the givers of energy in relationships (i.e., the *energizers*), extant research has neglected the experience and impact of relational energy from the perspective

of the receiver (i.e., the *energized*), giving us only partial understanding of how this process works. This study is designed to evaluate how relational energy plays a role in interactions from the perspective of the recipient. To fully develop how this relational perspective can apply to the conceptualization of energy, we draw from three well-established and relevant theories: interaction ritual theory, social contagion theory, and conservation of resources theory.

Interaction ritual theory. Collins' (1993, 2004, p. 47) interaction ritual theory refers to face-to-face interactions wherein "participants develop a mutual focus of attention and become entrained in each other's bodily micro-rhythms and emotions." A common example is feeling increasingly excited while participating in a cheering crowd at a sports game. The entrainment that occurs is due to "emotional energy" (Collins' term for energetic activation) that is generated and shared contagiously amongst interaction partners. It is this shared experience that influences both the intensity of an individual's emotions and also how that individual continues to interact with interaction partners. This is because as people "become . . . more aware of what each other is doing and feeling, and more aware of each other's awareness, they experience their shared emotion more intensely" (Collins, 2004, p. 48). A core assumption of interaction ritual theory is that individuals are motivated to pursue experiences and social interactions that elevate their energy and to avoid interactions that reduce it. Casciaro and Lobo (2008) found that participants were more likely to go to a colleague for task-related information with whom the information-seeker felt positive interpersonal affect and less likely to go to someone with whom the seeker felt negative interpersonal affect. Participants sought interactions where they expected to experience positive activation, even if it meant going to a less knowledgeable person. Interaction ritual theory provides two fundamental assumptions for an emerging theory of relational energy: (1) energy is a mechanism in social and interpersonal settings that influences individual behavior, and (2) activation is shared and spread contagiously between people.

Social contagion theories. Social contagion focuses on the spread of stimuli to other

people, such as the spread of emotions through emotional contagion (Hatfield, Cacioppo, & Rapson, 1994). The spread of positive emotions can have a host of desired effects on work behaviors, such as enhanced cooperativeness, minimized conflict, and increased task performance (Barsade, 2002). More generally speaking, social contagion extends beyond affective experience, describing the social transference of thoughts and ideas (Hirshleifer & Teoh, 2009), attitudes (Paxton, Schultz, Wertheim, & Muir, 1999), motivation (Radel, Sarrazin, Legrain, & Wild, 2010), and behaviors (Crandall, 1988). Importantly, these transfers share these resources between interacting individuals. Social contagion theory thus complements the contagious effect insinuated by interaction ritual theory, providing a potential mechanism by which human energy can be transmitted through social interaction.

      Conservation of resources theory. Conservation of resources theory (COR) argues that people retain, protect, and build resources, including energy, by striving to create social circumstances that help secure these resources (Hobfoll, 1989). COR scholars consider energy to be a scarce resource, such that it must be replenished when depleted (Hobfoll & Shirom, 2001). Thus, COR suggests that individuals may seek to maintain or replenish resources such as energy through other individuals. Scholars have employed COR theory to explain the functioning of several interpersonal constructs, including perceived social support (Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001), social capital (Carmeli, Ben-Hador, Waldman, & Rupp, 2009), and positive work relationships (Fritz, Lam, & Spreitzer, 2011). Overall, COR theory supports the idea that individuals can and will seek to foster the resource of energy through social interactions.

      Together, these theories provide a theoretical foundation for relational energy, explaining why individuals are motivated to associate with others who increase their feelings of energy and how this energetic activation transfers between interaction partners. We next empirically explore and test this construct. As relational energy is an emergent construct, we follow Edmonson and

McManus (2007) in employing a mixed-method approach to develop new theory based on scant existing theory. To do so, we first engaged in a qualitative study which garnered employee insights on the nature and functioning of relational energy at work.

Study 1: Emergent Understandings of Relational Energy

To understand how relational energy may function in a real work context, we administered an open-ended survey question to 64 individuals employed in a wide variety of industries (retail, financial, food, educational, health care, and hospitality), which enabled effective and efficient sampling of a broad range of perspectives about the experience of relational energy at work (Gephart, 1993). The survey asked these participants (41% female, 64% Caucasian, 4 years average work experience, ages from 18 to 38): "Have you ever had a co-worker, boss/supervisor, or team member that you felt energized to be around?" They were then prompted to type 100–200 words describing specifically how and why they were energized by this person and how this person influenced their work. The majority of respondents (59%) identified a leader as a relational energizer. In line with word-text coding analysis recommendations (Mossholder, Settoon, Harris, & Armenakis, 1995), we uploaded the responses into Excel and initially reviewed responses to generate a list of themes. All responses were then independently coded by the first author and another trained researcher. Analysis of these independent codings suggested that codings were identical 84% of the time, yielding a cross-tabbed Cohen's Kappa of $\kappa = .67$ ($p < .001$), which represents "substantial strength of agreement" (Landis & Koch, 1977, p. 165). Differences in codings were discussed until consensus was reached on all coding categorizations.

Insert Table 1 about here

Several themes emerged which match existing energy literature (Cole et al., 2012;

McDaniel, 2011) including positive affect, cognitive stimulation, and behavioral modeling. Descriptions of energizing partners were consistently associated with enhanced psychological resources—including the motivation, stamina, and activation language captured by our participants—that help employees meet work demands. Regarding this function of relational energy, respondents mentioned that their relational energizer made them feel as if they could work harder, enjoy their work, or be motivated to stick to their tasks: "She . . . keeps me motivated to keep up the hard work," "I was very motivated to do better at work," "[This person] made me want to achieve more in work," "People wanted to be around her and wanted to do well for her," and "I always feel . . . ready to go to these group meetings because of her." Other times, relational energy was described in terms of a renewed sense of vigorous capability ("He made me feel . . . driven," "He believes in me and what I am capable of doing, which pushes me to work harder and better"). For one participant, an energizing leader "bolstered [his] drive to complete the job with unfailing quality." We focus our analysis on motivational arousal, or the generation of feelings of motivation and elevated arousal towards one's capacity to do work, as more than nine of ten (92%) responses indicated this connection. Splitting the sample up by relationship type, we found that though the dimension of motivational arousal emerged most often in descriptions of leader energizers (97%), this aspect of relational energy was also prominent in coworker descriptions (81%).

Upon reviewing the data, it became clear that participants resonated with different types of energizer stimuli. While not all individuals were energized by the same means, motivational arousal emerged as the common crux of the experience of relational energy. Rather than suggesting a multi-faceted relational energy construct incorporating affective, cognitive, and behavioral components (which were each inconsistently described by participants), our data revealed motivational arousal as the most prominent and consistent feature of relational energy. Table 1 contains sample illustrative quotes from several participants which show how different

types of energizer stimuli yielded similar forms of psychological resources. Drawing from this finding, we conceptualize relational energy as energy which comes from another person, which captures the energizing *toward* the accomplishment of work tasks. Thus, we define relational energy as *a heightened level of psychological resourcefulness generated from interpersonal interactions that enhances one's capacity to do work*. Following Quinn, Spreitzer, and Lam (2012), we use the broader term *psychological resourcefulness* to capture the motivation, vitality, stamina, and vigor that is generated as a result of a series of interpersonal exchanges. To be clear, we are not implying that relational energy is a different "type" of energy, but rather use the adjective "relational" to identify the level at which energy (or energetic activation) exists or is enacted.

Nomological Network and Hypothesis Development

Our next task was to determine the extent to which this concept of relational energy is distinct from related constructs, and how it relates to desired work outcomes. This section addresses relational energy's distinctiveness from rival constructs and develops hypotheses for the influence of relational energy on job engagement and job performance.

Relational Energy and Related Constructs

Perceived social support. Perceived social support can refer to support from dyadic partners or collectives and captures the extent to which individuals perceive that they experience supportive social relationships at work with others (Wiesenfeld, Raghuram, & Garud, 2001). Social support also captures the perceived level of help or backing available for work-related difficulty, and its source can be from co-workers or supervisors. Dyadic social support is associated with, but distinct from, relational energy. Though both capture aspects of dyadic relationships, social support relates to a sense of connection and belonging and is proposed to yield positive feelings about the self (Halbesleben, 2006), while relational energy entails how another individual can influence the transfer of psychological resources towards doing work.

Thus, we propose the following:

Hypothesis 1: Relational energy is positively related to but distinct from perceived social

support.

Leader-member exchange. Given that leader-follower dyads were the most common

relational type identified when describing relational energy, it is important to differentiate

relational energy from the most commonly studied leader-follower relational construct: leader-

member exchange. Leader-member exchange (LMX) is a construct that captures the level of

reciprocal satisfaction, trust, and understanding in a leader-follower dyad (Graen & Uhl-Bien,

1995). Conversely, relational energy is not reciprocal. It reflects the energizing psychological

resources that one individual receives from another. Relational energy is not limited to leader-

follower dyads, but can occur between any two individuals. Also, relational energy connotes the

outcome of dyadic interactions (i.e., enhanced motivation to do one's work) rather than the

cognitive evaluation of relational quality typical of LMX. Therefore, we propose:

Hypothesis 2: Relational energy is positively related to but distinct from LMX.

Relational Energy, Job Engagement, and Performance

In addition to its conceptual distinctiveness, we endeavored to investigate the extent to

which relational energy predicts work outcomes. Two common and useful outcomes in the

literature are job engagement and job performance (Hinkin, 1995; Rich, Lepine, & Crawford,

2010). Study 1 provided qualitative evidence that the transference of energy from one person to

another is an important mechanism through which individuals are motivated to do work. This

occurs through the receipt of psychological resources to cope with job demands and meet

performance expectations. We formulated hypotheses that address how this process may be

associated with engagement and performance outcomes.

Job engagement. Job engagement captures the level of absorption and dedication an

employee has toward his or her job (Schaufeli & Bakker, 2004), reflecting the degree to which

employees apply their entire selves to their work roles (Rich, Lepine, & Crawford, 2010). The enhanced psychological resources entailed in relational energy will likely be associated with increased job engagement. Based on interaction ritual and social contagion theories, we theorize that the types of interactions employees have with others would likely impact employee job engagement. Kahn (1990) suggested that interpersonal interactions marked by dignity, respect, and appreciation from others in a work environment can foster job engagement, but he did not delineate the specific mechanisms that explain this relationship. We pose that relational energy serves as such a mechanism, as the transference of resources provides employees with the motivation and ability to act, which translates into engaged behaviors. In addition, conservation of resources (COR) theory suggests that the presence of work resources fosters job engagement, while their absence results in burnout (Saks, 2006), supporting the idea that the receipt of psychological resources, such as those produced by relational energy, will be associated with greater job engagement.

Some evidence emerged in the qualitative data that a connection exists between relational energy and job engagement. For example, "When working with him I'm more eager to engage." Interview statements also reflected other antecedents of job engagement (Kahn, 1990; Rich, Lepine, & Crawford, 2010) including meaningfulness, value congruence ("She turned tasks and 'work' into purpose and meaning"), and feelings of psychology safety in the environment ("She reinforced a lot of positive feedback which encouraged you to do well") (Edmondson, 1999). Energizers were described as being able to engage others by making menial or tedious tasks exciting and enjoyable ("He made the 'grind' of that work [public accounting] tolerable and . . . exciting, believe it or not" and "I worked harder with him because he made work fun and easy"). These statements suggest that relational energy is associated with some of the core antecedents of job engagement. Therefore, we predict relational energy will be positively related to job engagement.

Hypothesis 3: Relational energy is positively related to employee job engagement.

Job performance. We also expect that experiencing relational energy at work will be

positively associated with an employee's job performance. Cole et al. (2012) positively associated productive energy at the collective level with unit performance. Carmeli et al. (2009) associated employee vigor with increased performance. Baker, Cross, and Wooten (2003) found that individuals who acted as energizers to others had higher job performance. Employees who receive energy from coworkers or leaders in their organization will reciprocate with loyalty and extra effort, and would thus be associated with higher overall performance (Homans, 1961). Increased persistence and motivation has been found to lead to higher task performance (Brief & Weiss, 2002). We therefore hypothesize that relational energy is associated with increased individual performance.

Hypothesis 4: Relational energy is positively related to employee job performance.

We hypothesize that relational energy with another person at work will enhance an employee's job performance through job engagement. Job engagement, entailing enhanced persistence, dedication, and vigor at work, has been empirically associated with enhanced task performance. For example, across a variety of industries and occupations, job engagement was found to be positively associated with self-rated ($r = .28$), coworker-related ($r = .27$), and supervisor-rated ($r = .32$) performance (Halbesleben & Wheeler, 2008). In addition, job engagement mediated the relationship between organizational support and job performance (Rich, LePine, & Crawford, 2010). Since relational energy, like organizational support, is a type of job resource, we also predict that job engagement will mediate the relationship between relational energy and employee job performance.

Statements from the qualitative data also suggest that the personal resources received from relational energy enhanced the job engagement of employees, leading to higher job performance. In line with the literature which has shown a strong engagement–job performance relationship (Rich et al., 2010), we expect that the transfer of psychological resourcefulness comprised in relational energy will enhance employee job performance through the mechanism

of job engagement.

> *Hypothesis 5: The relationship between relational energy and employee job performance is mediated by employee job engagement.*

To empirically test our hypotheses related to relational energy, we conducted three quantitative studies, drawing data from both field and lab samples. In Study 2, we develop and validate a measure of relational energy and differentiate it from related constructs. In Study 3, we examine relational energy's prediction of unique variance beyond that of another predictor. In Study 4, we test our full model. Quantitatively examining relational energy forced us to make decisions about study design and scope. To isolate the effects of relational energy it was important to keep relationship type constant in our quantitative studies. Though we anticipate our hypotheses would also apply to coworker to coworker relational energy, Studies 2 through 4 focus on leader-member dyads, the most prevalent relationship type that emerged from our qualitative data.

Study 2: Relational Energy Scale Validation and Discriminant Analysis

Participants and Procedures

Three samples were used to develop and validate the relational energy scale. Samples A (184 full-time employees) and B (200 full-time employees) were drawn from a commercial subject pool (that is, a pool with registered participants who were paid to complete surveys). Sample C was drawn from a United States health services organization. Details and demographics of each sample are summarized in Table 2. All surveys were administered online.

Development of Relational Energy Measure

Item generation. Following the guidelines suggested by Hinkin (1995), our goal was to develop a robust and valid measure of relational energy from the perspective of the receiver. Informed by relevant literature and our inductively derived definition, the authors independently generated an initial list of 22 items and then met to discuss the face validity of each item. After discussion about the face validity and item clarity, we settled on 10 relational energy items to be

used for subsequent empirical testing, the number of items we felt allowed for subsequent

refinement and deletion. Items were scaled using a Likert scale from 1 (*strongly disagree*) to 7

(*strongly agree*).

   Exploratory factor analysis. Participants from Sample A were asked to rate someone

they work with based on the initial 10 relational energy items. From this data we ran a series of

principal components analyses using Varimax rotation. The factors were free to vary based on

the traditional Eigenvalue cutoff of 1.0. Following Hinkin (1995), we eliminated relational

energy items with low loadings (i.e., below .40) on the first factor or with unacceptably high

cross-loadings (i.e., above .40) on the second factor. The factor analysis was then rerun using the

remaining items. Three rounds of this process resulted in five items being dropped, yielding a

five-item, one-factor solution (α = .94). Scale items statistics are presented in Table 3.

   Exploratory discriminant validity analysis. The survey administered to Sample B

asked participants to rate their immediate supervisor on relational energy and the rival constructs

of social support (Rhoades, Eisenberger, & Armeli, 2001; four items, e.g., "My supervisor really

cares about my goals and values") and LMX (Scandura & Graen, 1984; seven items, e.g., "I have

enough confidence in my immediate supervisor that I would defend and justify his or her

decisions if he or she were not present to do so"). The Sample B survey also included three other

related measures of energy or relational connection at work: collective energy (productive energy

measure; Cole et al., 2012; 14 items, e.g., "People in my work group feel excited in their job"),

individual energy (emotional energy scale; Shirom, 2004; four items, e.g., "I feel I am capable of

investing emotionally in coworkers and customers"), and relational identification (Zhang, Chen,

Chen, Liu, & Johnson, in-press; seven items, e.g., "I feel strongly identified with this workgroup

because I share mutual respect with other members"). These three added constructs do not

capture dyadic phenomena (like perceived social support and LMX) and therefore are not direct

rivals to the relational energy construct. However, the energy and relational identification

measures were included in our discriminant validity analysis since they also represent aspects of the experience of energy at work and the strength or quality of relational connections at work. All measures were scaled to a 5-point agreement scale from 1 (*strongly disagree*) to 5 (*strongly agree*), with exception of the Scandura & Graen (1984) LMX scale which comprises multiple anchors that reflect low (1) or high (5) frequency, magnitude, probability, and effectiveness. The alpha reliabilities for these scales ranged from .86 to .96 (Table 4).

A principal components analysis (Varimax rotation, factors free to vary) revealed that all relational energy items loaded strongly onto one factor (loadings ranging from .82 to .86) with no cross-loadings onto other factors (full analysis results are available from the first author upon request). In addition, based on the .40 factor loading cutoff, no items from any of the other scales loaded on to the relational energy factor (cross-loadings ranged from .02 to .27). Overall, these results offer initial empirical evidence that relational energy is distinct from perceived social support, leader-member exchange, productive energy, emotional energy, and relational identification. Table 4 contains descriptive statistics, reliabilities, and correlations for all Sample B variables. As shown in Table 4, relational energy was positively related to its rival constructs of perceived social support ($r = .49$, $p < .001$) and leader-member exchange ($r = .45$, $p < .001$).

Using data from Sample C, we conducted a confirmatory factor analysis using Amos 19 (Arbuckle, 2010) to confirm the factor structure of the relational energy measure and further distinguish relational energy from perceived social support and leader-member exchange. The Sample C survey contained the same measures of relational energy, perceived social support, and leader-member exchange used in Sample B. As shown in Table 5, the three-factor solution (χ^2 [98] = 169.83, CFI = .98, TLI = .98, SRMR = .03, RMSEA = .05) fit the data better than either two-factor or one-factor solutions, supporting the uniqueness of relational energy from rival constructs. Overall, results from Samples B and C suggest that relational energy is related to but distinct from the rival constructs of perceived social support and leader-member exchange,

supporting Hypotheses 1 and 2.

Insert Tables 2 through 5 about here

Study 3: Relational Energy, Perceived Social Support, and Employee Job Engagement

In this study, we test the usefulness of the relational energy scale in predicting criteria beyond the rival construct of perceived social support. Data from 221 employees from a large United States health services organization (75% female, 64% Caucasian, average age 38, average tenure under supervisor 10.62 months) were used to test Hypothesis 3, specifically, that relational energy will predict employee job engagement. The two-part survey was administered as part of a voluntary and anonymous organizational assessment. Time 1 contained demographic questions, relational energy, and perceived social support measures. Time 2 (approximately one month later) contained an assessment of employee job engagement. Both surveys were administered online and sent to employee e-mails provided by the organization. The organization also provided us the supervisor number associated with each employee e-mail address, enabling us to link employees with their supervisor.

Measures

Relational energy. Participants were asked to rate their immediate supervisors on the five-item relational energy scale developed and tested in Study 2, using a 7-point Likert scale (7 = *strongly agree*). The alpha reliability for this scale was .96.

Perceived supervisor social support. Participants completed the same four-item supervisor social support scale administered in Study 2 using a 5-point Likert scale (5 = *strongly agree*). The alpha reliability for this scale was .87.

Employee job engagement. Participants were asked to complete a nine-item job engagement scale scaled to a 7-point Likert scale (7 = *strongly agree*) as in Schaufeli, Bakker, &

Salanova (2006). Sample items include: "I am immersed in my work" and "I am proud of the work that I do." The alpha reliability for this scale was .94.

Controls. Spector and Brannick (2011) recommend providing clear theoretical justification for the inclusion of controls and framing the impact of control variables as alternative hypotheses. We controlled for leader and employee gender since female employees and bosses are generally more relationally oriented (Eagly, 2009) and may be more likely to seek meaningful relational connections that are motivating. We controlled for leader and employee race to capture potential differences in cultural power distance or collectivism that could account for bosses and employees with lower power distance and higher collectivism, who will be more likely to develop closer working ties that are motivating (Gaines et al., 1997). We controlled for employee age to account for the possibility that those who report more relational energy could be simply younger, as vitality and productivity in the workplace has been reported to diminish with age (Skirbekk, 2008). We controlled for employee tenure in case relational energy is explained by newness in the organization where the employees may be in a honeymoon phase and are simply excited about working in their new job, or alternatively, to account for the possibility that those who have not self-selected out of the organization may be more likely to enjoy the work or have developed the personal stamina and motivation to persevere in the work. As mentioned above, we included perceived social support as a control to test the alternative hypothesis that the effect of relational energy on job engagement is not a matter of relational energy but rather a matter of perceived supportiveness from one's leader that fosters feelings of connection and belonging that generally enhance one's desire to be at work.

Analyses and Results

Since this sample had an average of 2.59 employees under each supervisor, we computed ICC scores and a design effect score (Kish, 1965: $Deff = 1 + [[$average group size $- 1]*$ ICC1]) to justify analyzing this data on the dyadic level. The ICC 1 and 2 scores for relational energy

were .20 and .39, respectively. The ICC2 score is well below Glick's (1985) recommended cut off of .60. In addition, the design effect score was also low (*Deff* = 1.31), which suggests that we are justified in not accounting for group effects in our estimations (Muthen & Satorra, 1995). Together, these results support our use of the data on the dyadic level, which is the theorized level of the relational energy phenomenon. Two sets of confirmatory factor analyses were conducted using Amos 19 (Arbuckle, 2010) to test Hypothesis 1 and ensure the distinctiveness of all study variables.

Hypothesis 1 states our prediction that relational energy will be related to but distinct from perceived social support. We first conducted confirmatory factor analyses using structural equation modeling to test the discriminant validity of relational energy and perceived social support. Fit-indices were compared across two rival models. The two-factor model with relational energy and social support modeled separately fit the data well (χ^2 [22] = 37.37; CFI = .99; TLI = .99; SRMR = .04; RMSEA = .05); significantly better than the one factor model (χ^2 [23] = 279.86; CFI = .79; TLI = .80; SRMR = .11; RMSEA = .21). We then tested the three-factor solution including the nine employee job engagement items in the analysis and found it was superior to any two- or one-factor solution, based on the χ^2 different test and standard cutoffs for fit indices (χ^2 [128] = 257.85; CFI = .98; TLI = .98; SRMR = .03; RMSEA = .05). Full analyses are available from the first author upon request.

Bivariate correlations shown in Table 6 demonstrate that the five-item relational energy scale was significantly associated with perceived social support (r = .58, $p < .001$), in support of Hypothesis 1. Hypothesis 3 states our prediction that relational energy will be positively associated with employee job engagement. Table 6 also shows that relational energy was also related to employee job engagement (r = .40, $p < .001$), showing initial support for Hypothesis 3. As shown in Model 2 in Table 7, perceived social support was positively associated with employee job engagement beyond demographic controls (B = .42; *95% C.I.* [.29, .55]; $p < .001$;

$\Delta R^2 = .14$). In Model 3, relational energy predicted additional variance in job engagement beyond social support ($B = .27$; *95% C.I.* [.14, .40]; $p < .001$; $\Delta R^2 = .07$), further supporting Hypothesis 3. We note here that relational energy explains unique variance beyond leader social support whether or not demographic control variables were included in our analyses.

Insert Tables 6 and 7 about here

To address potential concerns of common method variance, we conducted several post-hoc tests. Utilizing Harman's one-factor test with all self-report data, we found that one factor did not explain the majority of the variance in this study. As a more robust test and in line with past research (Conger, Kanungo, & Menon, 2000), we also created unmeasured latent method factors in structural equation modeling, connecting all self-report study items to this latent factor and constraining all the paths from this latent factor to be equal. By squaring the resulting regression coefficients from this latent factor, we observed that only 2% of the variance across these items was due to an unmeasured common factor. Furthermore, the association between the study variables was still highly significant ($p < .001$) when the unmeasured latent method factor was included in the model. Thus, it appears unlikely that our findings are explained by common method variance.

In Study 3, relational energy was shown to be related to yet distinct from perceived social support and to account for unique variance in employee job performance beyond perceived social support, supporting Hypotheses 1 and 3.

Study 4: Construct and Predictive Validity

To further establish the relational energy scale, in Study 4 we replicated the factor structure of the scale with another field sample, showed further differentiation from LMX (Hypothesis 2), and tested Hypotheses 3 through 5. While controlling for leader-member

exchange, we replicated the positive relationship between relational energy and job engagement (Hypothesis 3), and showed that relational energy is positively associated with employee job performance (Hypothesis 4) through the mechanism of job engagement (Hypothesis 5).

Participants and Procedures

The sample for this study consisted of 123 employees from a large health services organization. Of the employees, 76 percent were female, 53 percent were Caucasian, and the average age was 37. The average tenure of each employee was 62 months. As part of a two-stage annual organization assessment, we sent employees an e-mail through the company listserv with a link to an online survey asking employees, like Study 3, for information about their relationship with their direct supervisor, job attitudes, and demographics. Though the annual assessment was encouraged, it was also voluntary and anonymous (i.e., leaders would not know who did or did not participate), as all reporting of results to their supervisor was done in aggregate form. Time 1 and Time 2 assessments were administered approximately four weeks apart. The Time 1 survey contained items assessing relational energy and general demographic information. The Time 2 survey contained items for the employee to assess employee job engagement and leader-member exchange. We obtained objective employee performance data at Time 3, spanning the month after the Time 2 survey administration from the organization. Due to differences in employee functions, only 81 of the 123 total employees had objective performance data. Two of the employees with performance data did not fully complete the survey, and casewise diagnostics revealed an extreme outlier in this group with a standard residual value of 3.64. These three cases were not included in analyses making a total of 78 employees with performance data. ANOVA tests revealed that there was no difference between these employee groups. The organization provided us the supervisor number associated with each employee e-mail address, enabling us to link employees with their supervisor.

Measures

Relational energy. The relational energy scale developed in Study 2 (see Table 3) was used in Study 4. To make each item specific to their supervisor, "this person" was replaced with "my immediate supervisor" for each item. The alpha reliability for this scale was .96.

Job engagement. The same scale used in Study 2 (Schaufeli et al., 2006) was used to measure employee job engagement in Study 4. The alpha reliability for this scale was .93.

Job performance. As a proxy for employee performance, we requested and received objective productivity data that represents a key performance metric for this organization. This metric, which ranges from 1.50 (*most productive*) to-1.0 (*least productive*), captures the employees' discretionary decisions regarding how much time they spend performing core work tasks, as opposed to non-work activities (specifically, how much of the employee's shift was spent working to assist clients as recorded in the firm's computerized client support system). This performance criterion was selected based on insights from the qualitative study, capturing employee stamina and enduring motivation in doing repetitive work tasks.

Leader-member exchange. We controlled for employee ratings of leader-member exchange using a 7-item Likert scale (Scandura & Graen, 1984). Sample items from this scale include "Regardless of the amount of formal authority your immediate supervisor has, to what extent can you count on him or her to 'bail you out' at his or her expense when you really need it?" and "I have enough confidence in my immediate supervisor that I would defend and justify his or her decisions if he or she were not present to do so." The alpha reliability for this scale was .94.

Controls. We controlled for the same leader and employee demographic variables included in Study 3: leader gender and race, employee gender, race, age, and organizational tenure. We also had frequency of interactions with one's leader, but the results were equivalent whether or not we included this control, so we report the same controls as Study 3. We note here that relational energy explained unique variance beyond leader-member exchange whether or not

demographic control variables were included in our analyses.

        To show scale independence, we conducted a CFA for relational energy, leader-member exchange, and job engagement. The three-factor model fit the data significantly better (χ^2 [178] = 463.05; RMSEA = .05; SRMR = .03; CFI = .98; TLI = .97) than any other model, including the two-factor model with relational energy and leader-member exchange combined (χ^2 [180] = 1543.59; RMSEA = .11; SRMR = .10; CFI = .89; TLI = .87; $\Delta\chi^2$[3] = 1080.54, $p < .001$), or the one factor model (χ^2 [181] = 3793.02; RMSEA = .18; SRMR = .18; CFI = .71; TFI = .66; $\Delta\chi^2$[3] = 3329.97, $p < .001$).

Analyses and Results

        Since we had an average of 4.71 employees under each leader, and relational energy is a dyadic phenomenon, we conducted two tests to determine if we were justified in using this clustered data on the dyadic level, drawing from Glick (1985) and Muthen and Satorra (1995; similar to Study 3). The ICC 1 and 2 scores for relational energy were-.02 and-.09, respectively, the mean square between value (MSB = .95) was lower than the mean square within value (MSW = 1.04), and the design effect score was also low (*Deff* = .93). These low scores suggest that we are justified in not accounting for group effects in our estimations, supporting our use of the data at the dyadic level. As mentioned, casewise diagnostics revealed one outlier with a standard residual value of 3.64. Although results were equivalent when including this case, to conform with regression normality assumptions, this case was eliminated from analyses.

        Table 8 contains the descriptive statistics and bivariate correlations of all study variables. We found initial support for Hypotheses 3 and 4: relational energy positively relates to job engagement ($r = .43$; $p < .001$) and job performance ($r = .27$, $p < .01$). To test Hypotheses 3 and 4 we conducted regression analyses, and to test Hypothesis 5 we conducted a bootstrapped indirect effect analysis (Preacher & Hayes, 2008). For our regression analysis (Table 9), we computed a total of five models. All variance inflation factor (VIF) values were below standard

cutoffs (i.e., VIF < 2.1), suggesting that multicolinearity was not an issue. Hypothesis 3 states

that relational energy will be positively associated with employee job engagement. In Table 9

Model 3 we report that relational energy predicted job engagement beyond the rival construct of

leader-member exchange, and demographic controls (B = .24; *95% CI* [.06, .41]; $p < .05$; $\Delta R^2 =$

.04). Thus, Hypothesis 3 is supported.

Insert Tables 8 and 9 about here

Hypothesis 4 states that relational energy will be positively associated with employee job

performance. In Model 6, relational energy positively predicted employee job performance

beyond demographic controls and leader-member exchange (B = .13; *95% CI* [.02, .29]; $p < .05$;

ΔR^2 = .05), supporting Hypothesis 4. Hypothesis 5 states that relational energy will influence

employee performance indirectly through employee job engagement. In Model 7, employee job

engagement was positively associated with job performance (B = .21; *95% CI* [.09, .32]; $p < .01$;

ΔR^2 = .12) and the effect of relational energy on job performance went to zero, providing initial

support for Hypothesis 5. However, as a more robust test of indirect effects, we used the

bootstrap approach advocated by Preacher and Hayes (2008). This approach entails randomly

sampling 5,000 bootstrapped sets of cases from the original data to derive a bias corrected and

accelerated confidence interval that reflects the mediation effect. This approach helps to offset

the weaknesses of a causal steps approach (Hayes, 2009). Our bootstrapped procedure resulted in

an indirect effect of .04 with a 95% confidence interval that did not include zero [.001, .124],

providing support for the mediating role of job engagement in support of Hypothesis 5.

To again address common method variance concerns, we conducted several post-hoc

tests. Harman's one-factor test with all self-report data found that one factor did not explain the

majority of the variance. We also created an unmeasured latent method factor in structural

equation modeling, connecting self-report items to this latent factor and constraining all the paths

from this latent factor to be equal. By squaring the resulting regression coefficients from this

latent factor, we observed that only 3.6% of the variance across these items was due to an

unmeasured common factor. Furthermore, the association between the study variables is still

highly significant ($p < .001$) when the unmeasured latent method factor is included in the model.

Thus, it is unlikely that these findings are explained by common method variance.

General Discussion

As early as 1956, psychologists were making distinctions between the exchange of

information and the transfer of energy in interpersonal interactions (Newcomb, 1956, pp. 577–

578). Though there is a large literature comprising theoretical and empirical examinations of

information exchange (see Borgatti & Cross, 2003 for a review), empirical studies of

interpersonal energy transfer are scant. As human energy is a critical organizational resource, our

findings help build theoretical knowledge of how human energy can be derived from

interpersonal interactions. In line with this purpose, we introduced the construct of relational

energy, discussed its theoretical relevance to the work context, offered rationale and empirical

evidence supporting its conceptual uniqueness, and provided evidence for its predictive validity.

The results suggest that relational energy is a psychometrically robust, reliable, and valid

construct that occupies unique conceptual space relative to similar constructs. Our results also

provide support for relational energy being positively associated with job performance and job

engagement.

Theoretical and Empirical Contributions

Relational energy links theoretical insights from interaction ritual, contagion, and

conservation of resource theories to produce a clearer understanding of how interpersonal

interactions at work can be energizing. We highlight three important contributions of this

research: (1) theory and operationalization of a novel relational mechanism with implications for

desired work outcomes, (2) empirical support for interaction ritual theory situated in a work setting, and (3) insight into supervisor-employee influence processes.

Relational mechanism of energy. This study carefully defines and operationalizes relational energy from the perspective of the individual receiving energy from an interaction partner. Despite the fact that human energy has been cited as the fundamental resource of organizations (Katz & Kahn, 1966) and human interaction (Newcomb, 1956), few scholars have explored the mechanisms of the energizing influence of human interactions at work. For example, preliminary research implies that increased energy and vitalization are attained through interpersonal interactions (Fritz, Lam, & Spreitzer, 2011; Grant & Parker, 2009), but the mechanisms by which this transpires are seldom directly tested. In other words, existing theory suggests that employees are energized by emotive or stimulating interaction partners, but the nature of this social energy exchange and how these factors energize individuals have not been directly examined, as we do here.

Thus, the current study contributes to the theory on the role of energy in relational interactions in organizations by providing a theoretical explanation and operationalization of relational energy. The construct of relational energy explains why workplace interactions stimulate attitudinal and behavioral outcomes: they provide helpful psychological resources which can be allocated towards the doing of work. In line with COR theory, these psychological resources enhance employees' ability to be fully engaged in their work, leading to higher performance. COR theory also suggests that the enhanced psychological resources resulting from relational energy would enable greater coping with workplace stressors and burnout, enhancing workplace well-being (Sonnentag, Mojza, Demerouti, & Bakker, 2012). Such topics would be worthwhile to explore in future research.

Empirical support of interaction ritual theory. While interaction ritual theory has had decades of theoretical development in the sociological literature, this study represents one of the

few attempts to empirically assess this theory and to test its precepts across a series of workplace settings. Interaction ritual theory helps to explain why individuals seek certain social interactions (that generate feelings of excitement, enthusiasm, and positivity) but avoid others (that do not).

Here, we extend interaction ritual theory in two ways. First, we provide empirical support for interaction ritual theory as applied to a workplace context. Our relational energy scale measures the extent to which an employee is invigorated, feeling increased vitality, stamina, and energy to do work, after an interaction with a particular interaction partner. This is consistent with Collins' (2004) description of the effects of receiving energy from an interaction. Our scale development and predictive validity analyses provide perhaps the first measure that can be used to quantitatively assess received relational energy. Second, our study and scale items are employed in workplace settings. Thus, while Collins studied the receipt of emotional energy in generalized social environments (such as taverns and ladies' social groups), we situate this theory in an organizational setting where enhancing work effectiveness is a salient and desired outcome. Our finding that interactions which generate received psychological resources yield desired work outcomes provides a compelling reason for the significance of this theory to organizations.

Leader influence processes. Though relational energy is a construct that could characterize many types of relationships, our use of the leader-follower relationship in Study 2 specifically contributes to the leadership literature. Existing leadership constructs imply that leadership is largely synonymous with influence, as leaders influence followers using mechanisms such as persuasion, charisma, providing resources, or exchanging information (DeRue & Ashford, 2010). The mechanisms that account for the transfer of influence, however, have not been adequately articulated nor tested (Atwater & Carmeli, 2009).

Our research shows that the energy resulting from leader-follower dyadic interactions is

associated with changes in follower job engagement and performance. That is, leaders are cast

in a novel, expansive role as energy brokers who may enhance follower work functioning. The

leader-follower relationship has also been studied with the construct of LMX, which has yielded

understanding of the reciprocal or two-way nature of leader-follower relationships. Conceptually,

however, LMX focuses more on the perceptions of trust and understanding in a dyad, while

relational energy captures the actual transfer of resources in a dyad. This adds a new facet to our

understanding of both the value of leader-follower relationships, as well as the magnitude of the

responsibility and opportunity leaders have to transfer such resources to employees on a regular

basis. We note that the correlation of relational energy was .45 in Study 2, and .67 in Study 4—

results which may be explained by contextual differences across samples and highlight the need

to explore potential moderating variables to this relationship. Overall, our approach expands the

role of leaders to include the provision of energy in addition to being information sources,

extrinsic reward-brokers, or vision-givers. This adds to the leadership literature by identifying

specific interpersonal effects that leaders can have on followers through the transfer of

psychological resources.

Lastly, this study highlights the need for complementarity between leader approaches and

follower individual differences or preferences (dominance complementarity theory; Carson,

1969; Grant, Gino, & Hofmann, 2011; Perry, Witt, Penney, & Atwater, 2010). For example,

given the varied energizing stimuli we observed in the qualitative data, leaders who behave

charismatically by being intellectually stimulating or modeling extraordinary behaviors may not

energize *all* followers. The advantage of this measure of relational energy is that it captures the

perceived result of the interaction and is measured from the perspective of the follower, rather

than assuming effective influence from leader behaviors. That is, the specific content of a

leader's behavior is secondary to whether or not a follower personally perceives interactions with

the leader as energizing. Thus, relational energy more directly captures follower perspectives and

interpretations, helping to address a commonly cited weakness of extant behavioral leadership research (Howell & Shamir, 2005; Kellerman, 2008).

Empirical contributions. Several important empirical contributions of this research are noteworthy. First, we developed a new relational energy scale and replicated the factor structure across five different samples. The factor structure and reliability remained consistent whether participants were rating coworkers (i.e., Study 2, Sample A) or work leaders. Second, we conceptually and empirically differentiated our construct from related constructs to support our claim that relational energy occupies unique space in the nomological network of existing constructs. Third, as a usefulness test, we show that relational energy is associated with variance in employee job engagement beyond the common predictors of perceived social support and LMX and that relational energy predicts employee job performance beyond LMX. Fourth, this research provides initial evidence that relational energy is associated with employee job performance through employee job engagement.

Limitations and Future Research

We note several limitations to be considered when interpreting these results. First, though the job performance measure was obtained through a unique source, common method variance may be inflating the relationship between relational energy, perceived social support, and job engagement in Study 3 and relational energy, leader-member exchange, and job engagement in Study 4, since these variables were assessed by employees. To mitigate concerns of common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), we employed several recommended strategies. We used temporal separation, inserting four weeks between Time 1 and Time 2 surveys. We sought to reduce evaluation apprehension and social desirability bias by emphasizing in all communications and in survey instructions that all responses would be kept confidential and evaluated in aggregate form only. Finally, we used several post-hoc tests listed in the results sections of Studies 3 and 4 to demonstrate the likelihood that our findings are

not explained by common method variance.

Second, the leader-follower dyadic relationships included in Studies 3 and 4 may limit generalizability to other types of workplace relationships. Future research should assess this validated relational energy scale to see if similar associations are found with other types of relationships, such as employees receiving relational energy from peers or leaders receiving relational energy from subordinates.

Third, due to our study's cross-sectional nature, we cannot rule out the possibility of reverse causality, even though we gathered data in two stages. For example, individuals who are higher performers might be more prone to more easily receive relational energy. However, to begin to address this issue, we reran our bootstrapped indirect effect analysis in reverse order with performance predicting relational energy through job engagement. The 95% confidence interval included zero [-.12, .34], which provides some support for the causal direction of our model. Future research should employ a longitudinal design or manipulate relational energy in a controlled lab experiment to reinforce the causal direction of our model.

Fourth, due to survey space restrictions, we were unable to control for additional potential rival constructs in Studies 3 and 4. Though relational energy predicted variance in job engagement beyond perceived social support and LMX and showed a stronger relationship with job engagement (Study 3: $r = .40$; Study 4: $r = .43$) than past studies have shown for coworker social support ($r = .16$; Schaufeli & Bakker, 2004, p. 306), supervisor social support ($r = .21$; Hakanen, Bakker, & Shaufeli, 2006, p. 503; $r = .25$; Saks, 2006) or LMX ($r = .26$; Schaufeli & Bakker, 2004, p. 306),[1] future research should examine the degree to which relational energy explains unique variance in a variety of organizational outcomes beyond additional existing constructs.

More work remains to further understand energy transfer between individuals. In the

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[1] For comparison purposes, correlational values were averaged for the three dimensions of job engagement.

spirit of multi-trait, multi-method construct validation, future research should compare relational energy assessments from self- and other-report sources to examine the degree to which energizers are aware of their ability to energize others. For example, a study could compare the intent of one interaction partner in sending energy, and how those energetic resources are received through the course of an interpersonal interaction. Future research should also examine whether relational energy is stable over time (i.e., test-retest reliability).

While our model focused on the relational energy construct and its outcomes, future research might also examine antecedents of relational energy both at the individual level (i.e., personal well-being, self-esteem, extroversion) and at the dyadic level (i.e., demographic similarity, power status, relationship tenure). This type of investigation could provide practical insight about what forms of energizer stimuli may match particular individual differences, potentially informing selection processes (e.g., relational energizers for key positions), and interpersonal or team effectiveness (e.g., harmonizing team member work styles).

It could be important to explore any possible "dark side" of relational energy. Spreitzer et al. (2011) proposed that, unlike forms of energy that are depleted when expended, energy generated interpersonally is enhanced and renewed when used. It may be important to further understand the extent to which being an "energizer" to others is sustainable. Are energizers able to maintain their ability to energize others over time? Or is the act of energizing others on a routine basis depleting over time? It may be that expending personal energy to give relational energy to others results in a decreased ability to self-regulate (Baumeister, 2002). Longitudinal dyadic data could help address these questions. Future research could explore whether relational energizers experience workflow disruption or decreased performance due to frequent visits from depleted co-workers, and whether workers may also fail to develop their own methods of reenergizing, if they become too dependent on relational energizers.

Conclusion

The construct and theoretical development of relational energy provides a theory-driven operationalization of how relationships can be energizing and how this leads to more engaged, better performing workers. As the average worker is becoming increasingly energy depleted due to working longer and more intense hours (Fry & Cohen, 2009) and interest in employee burnout continues to burgeon (Halbesleben & Buckley, 2004), relational energy represents an important construct in human organizing. More fully understanding the different sources from which employees can derive energy to offset this burnout becomes increasingly important. This research provides additional understanding of how individuals can derive and maintain energy from others at work, providing important foundational support for the internal, discriminant, and predictive validity of the relational energy construct and setting the groundwork for additional research.

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Table 1

Study 1 Exemplary Quotes

Motivational Arousal Type	Stimuli from Energizer		Relational Energy[a]
Positive Affect	"She energized me because she loved her job and was in general, a very happy person. She always came in with a smile on her face which created a positive atmosphere."	→	"Having [this] energizing boss made me feel motivated…to work. Working with this person gave me energy to get my job done. It helped encourage me to work my hardest and take pride in my work. I wanted to do well so that she was happy and proud of me."
Cognitive Stimulation	"His energy made me feel…that my feedback was very factual and useful. This person motivated me to work harder and I also paid more attention to detail. He brought to the room…knowledge and a different perspective I found very interesting."	→	"On days after having meetings with him I got twice as much work done because of motivational energy that he brought to the room."
Behavioral Modeling	"She was involved in a lot of research and developed her own blog where she gathered her own thoughts and personal research in specific topics of sociology. Her clear ambition of knowing what she wants to do, standing up to do what she really loved and her commitment to the field really inspired me."	→	"I felt inspired, motivated, and energetic. I felt like I became more interested in the topics that we researched and I was also more responsible in doing my work in the project."

Note. Quotes from each row came from the same respondent.

[a] Psychological resources gained from energizer stimuli

Table 2

Study 2 Samples

Sample	Source	Purpose	n	% Female	% Caucasian	Mean Age	SD Age	Mean Tenure[a]
A	Commercial subject pool	Exploratory factor analysis	184	75	81	45	11.45	--
B	Commercial subject pool	Exploratory factor and discriminant validity analysis	200	67	77	38	7.25	3.66
C	Health services organization	Confirmatory factor and discriminant validity analysis	266	64	72	36	10.13	.83

[a] years working with energizer

Table 3

Study 2: Sample A Relational Energy Scale Descriptive Statistics, Loadings, and Reliability

	Survey Statement	Item mean	Item *SD*	Factor loadings
1	I feel invigorated when I interact with this person.	5.18	1.47	.61
2	After interacting with this person I feel more energy to do my work.	5.01	1.49	.69
3	I feel increased vitality when I interact with this person.	4.72	1.51	.76
4	I would go to this person when I need to be "pepped up".	4.85	1.72	.73
5	After an exchange with this person I feel more stamina to do my work.	4.75	1.45	.72

Table 4

Study 2: Sample B Correlation Matrix of Relational Energy and Related Constructs

	Mean	*SD*	**1**	**2**	**3**	**4**	**5**
1 Relational Energy	4.02	.91	(.95)				
2 Perceived Social Support	3.69	1.02	.49	(.87)			
3 Leader-Member Exchange	3.09	.63	.45	.75	(.92)		
4 Productive Energy	3.67	.82	.54	.54	.51	(.96)	
5 Emotional Energy	3.99	.78	.50	.42	.32	.49	(.93)
6 Relational Identification	3.63	.78	.55	.54	.52	.77	.56	(.86)

Note. N = 200. All coefficients significant at *p* < .001.

Table 5

Study 2: Sample C Confirmatory Factor Analyses

Model and Structure	χ^2	df	$\Delta\chi^2$	Δdf	RMSEA	SRMR	CFI	TLI
1. **Three factors: Relational Energy, Perceived Social Support, and Leader Member Exchange**	**169.83**	98			**.05**	**.03**	**.98**	**.98**
2. Two factors: Relational Energy and Perceived Social Support combined	896.82	100	726.99***(2 vs. 1)	2	.17	.13	.82	.78
3. Two factors: Relational Energy and Leader-Member Exchange combined	833.39	100	663.56*** (3 vs. 1)	2	.17	.13	.83	.80
4. One factor: All combined	1143.41	101	973.58***(4 vs. 1)	3	.20	.09	.76	.72

Table 6

Study 3 Correlation Matrix

	Mean	SD	1	2	3	4	5	6	7	8
1. Employee Job Engagement	4.99	.84	(.94)							
2. Relational Energy	5.25	.98	.40***	(.96)						
3. Perceived Social Support	4.04	.91	.40***	.58***	(.87)					
4. Leader Gender [a]	1.44	.50	.02	-.07	-.04					
5. Leader Race [b]	.88	.32	.04	-.04	.03	-.08				
6. Employee Gender [a]	1.37	.48	.04	-.07	.05	.15*	-.06			
7. Employee Race [b]	.83	.37	-.05	.02	.02	-.10	.03	.07		
8. Employee Age	55.22	58.60	.06	.01	.11	.02	.16*	-.17*	.06	
9. Employee Tenure	34.19	9.17	.21**	.01	.07	.09	.05	.11	.06	.32***

Note. $N = 157$.
[a] Gender: 1 = male, 0 = female. [b] Race: 1 = Caucasian, 0 = Minority.
$p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7

Study 3: Regression of Relational Energy on Employee Job Engagement, Controlling for Perceived Social Support

	Model 1	Model 2	Model 3
	Job Engagement	Job Engagement	Job Engagement
Dependent Variable			
Controls			
Leader Gender [a]	-.00[-.24,.24]	.04[-.18,.25]	.06[-.15,.26]
Leader Race [b]	.23[-.17,.64]	.20[-.16,.56]	.29[-.05,.63]
Employee Gender [a]	.00[-.25,.25]	-.08[-.31,.14]	-.01[-.23,.21]
Employee Race [b]	-.29[-.62,.04] [†]	-.24[-.53,.05]	-.31[-.59,-03]*
Employee Age	.02[.01,.04]**	.02[.01,.04]**	.02[.01,.03]**
Employee Tenure	-.00[-.00,.00]	-.00[-.00,.00]*	-.00[-.00,.00] [†]
Predictors		]	]
Perceived Social Support		.42[.29,.55]***	.22[.07,.38]**
Relational Energy			.27[.14,.40]***
F	2.66*	8.71***	10.40***
R^2	.10	.29	.36
ΔR^2		.19***	.07***

Note. N = 157. All values reflect unstandardized beta coefficients with 95% confidence intervals in parentheses.
[a] Gender coded as 1 = male, 0 = female. [b] Race coded as 0 = minority, 1 = white.
[†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 8

Study 4 Bivariate Correlation Analysis

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Employee Performance [a]	-.34	.47									
2. Employee Job Engagement	4.76	.92	.37**	(.96)							
3. Relational Energy	5.13	1.00	.27**	.43**	(.93)						
4. Leader-Member Exchange	3.41	.99	.23*	.46**	.67**	(.94)					
5. Leader Gender [b]	.34	.48	.04	.09	-.12	-.17*					
6. Leader Race [c]	.62	.49	-.20	-.13	.09	.01	.10				
7. Employee Gender [b]	.27	.45	-.03	-.05	.05	.20*	.02	.04			
8. Employee Race [c]	.65	.48	-.16	-.09	.09	.07	-.20*	.20	.21*		
9. Employee Age	37.19	9.80	-.21†	.15	-.04	-.01	-.10	.11	.12	.04	
10. Employee Tenure (months)	51.93	43.85	-.05	.26**	-.04	.08	-.04	-.16	.01	-.24**	.42**

Note. $N = 123$.
[a] For objective employee performance, $N = 78$. [b] Gender coded as 1 = male, 0 = female. [c] Race coded as 1 = white, 0 = minority.
† $p < .10$, * $p < .05$, ** $p < .01$.

Table 9

Study 4: Regression of Relational Energy on Employee Job Engagement and Job Performance, Controlling for Leader-Member Exchange

Dependent Variable	Job Engagement[a]			Job Performance[b]			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Controls							
Leader Gender[c]	.18[-.16,.52]	.43[.13,.73]	.44[.15,.74]**	.09[-.12,.29]	.16[-.04,.36]	.14[-.06,.34]	.02[-.18,.21]
Leader Race[d]	-.15[-.48,.18]	-.24[-.53,.05]	-.27[-.55,.01][†]	-.15[-.35,.05]	-.16[-.35,.03]	-.19[-.38,-.01]	-.13[-.31,.04][†]
Employee Gender[c]	-.03[-.39,.32]	-.26[-.58,.05]	-.20[-.51,.11]	-.02[-.26,.21]	-.11[-.34,.12]	-.07[-.30,.16]	-.02[-.23,.19]
Employee Race[d]	.04[-.33,.40]	.09[-.23,.40]	.07[-.24,.37]	-.02[-.23,.19]	-.00[-.20,.20]	-.03[-.22,.17]	-.02[-.20,.17]
Employee Age	.01[-.01,.03]	.01[-.00,.03][†]	.02[-.00,.03]*	-.01[-.03,.00][†]	-.01[-.02,.00][†]	-.01[-.03,-.00]*	-.02[-.03,-.00]*
Employee Tenure	.00 [.00,.01]*	.00[.00,.01][†]	.00[.00,.01]	.00[-.00,.00]	.00[-.00,.00]	.00[-.00,.00]	.00[-.00,.00]
Predictors							
Leader Member Exchange		.46[.32,.60]***	.30[.11,.48]*		.14[.05,.23]**	.05[-.07,.17]	-.03[-.15,.09]
Relational Energy			.24[.06,.41]*			.13[.01,.25]*	.09[-.03,.21][†]
Job Engagement							.21[.09,.32]*
F	1.91[†]	8.08***	8.38***	1.34	2.57*	2.91**	4.43***
R^2	.09	.33	.37	.10	.20	.25	.37
ΔR^2		.24***	.04*		.10**	.05*	.12**
95% CI[e]							[.002,.128]

Note. All values reflect unstandardized beta coefficients with 95% confidence intervals in parentheses.
[a]$N = 123$. [b]$N = 78$. [c]Gender coded as 0 = female, 1 = male. [d]Race coded as 0 = minority, 1 = white. [e]Represents a biased corrected and accelerated confidence interval for indirect effects based on 5,000 bootstrapped samples (see Preacher & Hayes, 2008).
[†]$p < .10$, * $p \leq .05$, ** $p < .01$; *** $p < .001$