

Is stress in action teams good? The role of climate in the stress-shared mental models relationship.

Research on teams, has emphasized the need for the team to possess shared mental models (SMM) (i.e., overlapping task and teamwork knowledge) as these provide adequate coordination for effective functioning (Mohammed & Dumville, 2001). Yet, little is known about the antecedents of SMM, leading many authors to suggest this as an important area for future research (e.g., DeChurch & Mesmer-Magnus, 2010; Lim & Klein, 2006; Marks, Zaccaro, & Mathieu, 2000; Mohammed et al., 2010; Pearsall, Ellis, & Bell, 2010). This gap in the literature leaves organizations and human resource managers with little knowledge regarding how to foster SMMs in order to improve the performance of their teams. In addition, research has also shown that such SMM take time to develop within teams (McComb, 2007) making it difficult for action teams to have the opportunity to benefit from their positive affect on team performance. Action teams are defined as "short-term mission teams that are formed around a certain task ... and are dissolved upon its completion" (Vashdi, Bamberger, Erez, and Weiss-Meilik, 2007). Military, rescue teams, healthcare teams (OR teams), and aviation crew, are only some examples (Hirschfeld and Bernerth, 2008; Kozlowski & Bell, 2003; Vashdi et al., 2007). In an attempt to address these gaps in the team literature we build hypotheses and examine a number of factors that may combine to facilitate the occurrence of SMM in action teams.

Based on theories of stress within teams we suggest that the extent to which a situation is potentially stressful for the action team will be positively related to both task and team mental models. More specifically, as action teams such as cockpit teams, have very strong interdependence, each team member deeply understands and internalizes that he/she relies on the other teammates to accurately solve problems and complete the mission successfully. Based on Torrance (1967) who claimed that team members are more likely to seek the judgments of others, even of a lower status, in stressing conditions and on Lanzetta (1955) who found that, in small

teams, stress resulted in a more democratic approach to problem-solving, Driskell and Salas (1991) concluded that there is "increased receptivity under stress" (p.476). Such receptivity in highly interdependent teams is likely to help team members recognize the other team member's mental models, be attuned to how they see the processes and procedures that will help task attainment and adjust their mental models so as to be able to deal with the new, stressing conditions. Thus, we assume that action team-members will exhibit a more common understanding about interaction patterns and responsibilities (Team Mental Models; TEMM) as stress increases. Similarly, Entin & Serfaty (1999), claim that when a mission's demands increase and stress occurs, team members' focus turns heavily to the task, and they allocate more cognitive resources to deal with the urgent issues regarding the mission at hand. Given the common professional background and the meticulous training among action team members (e.g. Espevik et al., 2006), which are consistently trained for coping with emergency, we argue that stressing conditions will enhance Task Mental Models (TAMM), as team members may return to task basics and to assigned protocols, which are shared knowledge and commonly trained.

Further we adhere to Bamberger's (2008) call for context theories of management and suggest short term emergent climates within the team may moderate the relationship between stress and SMM. As a strong teamwork climate fosters an environment that enables open and direct discussion even when dealing with complicated and interpersonal issues (Miles & Kivlighan, 2008), we propose that action teams undergoing stressing conditions are even more likely to enhance reciprocity and the tuning of mental models to those of the other team members when there is a strong teamwork climate (i.e. behaviors that represent values of cooperation, coordination and communication) than when teamwork climate is low.

As for safety climate, in response to real and practical development and needs, research has extended the interest in such climate from long-term and relatively stable teams, to short-term and more dynamic teams, namely, action teams (Uitdewilligen, Waller & Pitariu, 2013). In such teams, under a strong safety climate, team members are more likely to follow the safety protocols when a

risky and stressing condition occurs, generating high shared TAMM, more than when safety climate is low.

We tested our hypotheses using a questionnaire distributed to 158 pilots in 65 cockpit-crew teams from an Israeli airline. The extent to which the team's mental models are shared, was calculated similar to what Webber et al. (2000), using the Rwg scores to assess the extent to which the team members answers to the given scenarios are similar. The Severity of stressing conditions was measured by aggregating responses of three chief officers in the airline who were asked to assess the severity of the adverse events reported by the team who actually flew the plane on a scale from 1 (not stressful) to 5 (extremely stressful).

Our analysis did not find support for a main effect of stressing conditions and team mental models, but we find a marginally significant positive relationship between stressing conditions and task mental models ($b=0.17$, $p<0.1$). More importantly, we found that teamwork climate moderated the relationship between stressing conditions and team mental models. When teamwork climate is high the higher the stressing conditions the more the team mental models are shared (i.e. the stronger the team mental models). But, when teamwork climate is low or moderate there is no significant relationship between stressing conditions and team mental models. As for the moderating role of safety climate we found a marginally significant result.

Our results point to the fact that when positive team climates are high in action teams, stressing conditions result in more shared mental models. While climate has been found in the past to buffer the relationship between stress and outcomes (Bakker & Demerouti, 2007), we claim that the mechanism at play in action teams are different and that climate will not simply eliminate a negative effect between stress and SMM but that it will promote a positive effect of stress.

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What Do We Learn From Errors: Regulatory Focus Perspective

Scholars have long recognized the role of errors in individual and collective learning (Edmondson, 2002; Zakay, Ellis & Shevsky, 2004; Sitkin, 1992). Specifically, errors may lead to skill development and behavior change and ultimately result in performance improvement (Keith, 2011; Steihauser & Kiesel, 2011). Additionally, errors can highlight ineffective organizational practices and result in improved systems or processes (Ramanujam & Goodman, 2003).

Recognizing such benefits of errors for individuals and organizations, scholars have dedicated much attention to studies of conditions affecting error learning. A common finding of these studies is that growth and improvement orientation is important for realizing the learning potential of errors. For example, there is evidence that collectives characterized by strong learning culture increase individuals' inclination to exchange information and knowledge about errors (Liang et al., 2012). Analogously, creative task environments promote experimentation behaviors and instill the attitude of welcoming errors and learning from them (Goh et al., 2013). In the training setting too, emphasis on errors as a source of learning improves metacognitive functioning (e.g., self-monitoring and evaluation) and results in better adaptive transfer (Keith & Frese, 2005). Lastly, goal orientation research suggests that learning goal orientation makes individuals recognize errors as a source of feedback and is thus beneficial for performance (Dweck & Leggett, 1988). In sum, conditions and mindsets predisposing individuals toward growth and improvement have been shown to positively affect learning from errors.

Research also shows that situations imbuing individuals with concerns for their security, such as a blaming culture, tasks demanding flawless execution, error avoidant training settings, and performance goal orientation are likely to inhibit learning from errors. For instance,

Edmondson and Tucker discuss how medical staff's obligation to not do harm to a patient and associated repercussions for mistakes may prevent hospital nurses from openly communicating about and learning from errors (2003). Further support for this logic is offered in the psychological safety research that shows that removal of threats to one's security increases error learning (Edmondson & Lei, 2014). Therefore, preoccupation with security concerns is typically related to low engagement in learning following errors.

In our research, we examine the boundary conditions of the effects of growth versus security orientation on error learning. We adopt regulatory focus theory (Higgins, 1997, 1998) to specify these effects. In particular, we hypothesize that when individuals function under prevention focus (i.e. strive to maintain security), they view errors as losses and threats and develop practices aimed at minimizing these threats, such as error prevention and error response practices. In contrast, when individuals are in promotion focus, (i.e. strive to achieve growth), they view errors as nongains and create knowledge aimed at realizing the gain, such as elaboration of task schemas and emotional coping practices.

In the two studies we have conducted to date, we develop and validate a multidimensional scale of learning from errors that takes into account distinctions among the four types of error learning outcomes: 1) task learning, or updated task mental models; 2) prevention learning, or implementation of practices that block occurrence of errors; 3) response learning, or implementation of practices aimed at correction and recovery from errors, and 4) coping learning, or adjusted emotional coping behaviors and attitudes. Furthermore, we examine the relationships between promotion and prevention foci on one hand and these four error learning outcomes on the other and find preliminary support for our hypotheses.

The contribution of this work is manifold. First, we contribute to the literature on errors by suggesting that error learning is not homogenous, but rather multidimensional. The offered inventory of error learning outcomes suggests that individuals may attain these outcomes concurrently, score high on any one of them individually, or experience any combination of them, all which indicate learning. Therefore, we expand on the notions of reduced error occurrence or improvement performance as indicative of learning and suggest a more nuanced view on what can be learned from errors.

Secondly, we add to the literature on conditions surrounding learning from errors and literature on regulatory focus. Specifically, we explicate how the type of error learning serves as a boundary condition for the positive effects of promotion focus on learning. Namely, we show that promotion focus may not stimulate the learning of prevention or response strategies. Similarly, we show that depending on the type of error learning outcome, the inhibiting effects of prevention focus on learning may be reversed.

Lastly, this work may have important implications for practice by illuminating the range of learning outcomes that organizations and their individual members can extract from error experiences. Additionally, our findings may be helpful in developing effective regulatory focus interventions and crafting organizational environments for stimulating desired types of learning from errors.

Avoiding errors while learning from them: A team configuration approach to the error paradox

Today's work teams face intense pressures to achieve error-free performance while striving for learning and innovating. To resolve the tension between two competing, or paradoxical, demands, considerable error literature suggests that teams should intently avoid errors while relentlessly learning and experimenting (if errors do occur, Frese & Keith, 2015; Lei, Naveh, & Novihov, 2016). Despite the intuitive appeals of doing "both-and" (i.e., simultaneously avoiding errors and learning from them), few theories and research have explained how and when such a dual pursuit can be realized and how and when it exerts positive influences on team errors. Moreover, implicit in the "both-and" error approach is that excelling at both is optimal for reducing errors. However, there is reason to question whether striving for both may harm, rather than help, the efforts to reduce errors. Thus, our goal in this paper was to address these puzzles by delineating and testing an integration mechanism that helps team balance error avoidance and learning and ultimately benefit from this balancing act.

We focus primarily on a team configuration perspective (i.e., the proportions of members with different attributes in a team) and investigate what types of configuration can help a team maintain a balancing act and reduce errors. We examined team composition concerning the proportion of members who have different cognitive goal orientations – namely, performance avoidance, learning, and having both (Ames & Archer, 1988; VandeWalle, 1997). The team configuration perspective is inspired by the notion of "structural ambidexterity", which suggests that organizations can manage trade-offs between conflicting demands by building "dual structures" so that certain business units and groups focus on one priority (e.g., efficiency, control), while others focus on another (e.g., learning, flexibility). Similarly, a dual structure can exist in a team such that some team members have a high learning goal orientation (LGO) and are thus willing to make errors and take risks, while some members have a high performance avoidance orientation (PAO) and are concerned about performance evaluation and prefer to avoid errors.

There also exist team members who can score high on both PAO and LGO (who we refer as “rare finds”). We thus suggest the proportion of team members with a high PAO or that of rare finds, is negatively related to team errors, but the proportion of members with a high LGO is positively related to team errors. Moreover, we also suggest a three-way interaction effect of different team configurations (proportions of high PAO, high LGO, and high on both) on team errors (Lei et al., 2016).

To understand the mechanisms through which team configurations affect team errors, we included a team process factor – task information elaboration - in our study. Consistent with team process theories (Marks, Mathieu, & Zaccaro, 2001), we argue that information elaboration process is the means by which members with different goal orientations can share distinctive perspectives, carefully consider the unique information provided by certain goal orientation, and develop optimal solutions, ultimately reducing team errors. We thus hypothesize task information elaboration mediates the effects of team configurations on team errors, including a moderated mediation relationship (see Figure 1 for our hypotheses).

We collected survey data over 6 months from 629 employees working in 50 units belong to a hospital, an advanced technologies R&D organization, and a software development organization in Israel. We achieved a response rate of 97% for our questionnaires. All survey items assessing different goal orientation (i.e., PAO, LGO), task information elaboration, and control variables (e.g., team psychological safety, error climate, etc.) were based on the scales that have been validated in previous studies and were translated from English to Hebrew and then back translated to English. Only after all surveys were completed three months later, the managers of these teams coded all documented errors (based on the organizational records during the past four months till they were contacted a) for each team. Following a proportion approach first used by Miron-Spektor, Erez and Naveh (2011), we constructed team proportions of high PAO members, of high LGO members, and of rare finds. Given

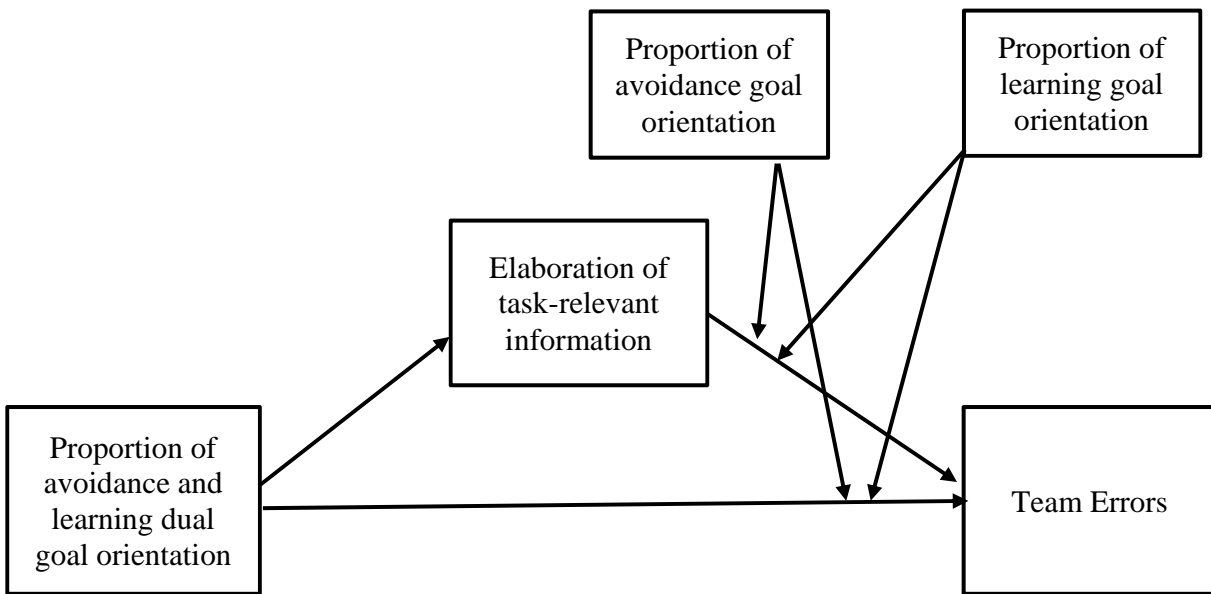
the data came from different organizations in different industries, we standardized the goal orientation scores before our proportion calculation. We used the cutoff point of scoring at and above 25% to define a high score. We also aggregated information elaboration and other control variables to the team level score after they passed the check of the intraclass correlations (ICC(1), ICC(2)).

Our regression analyses showed a significant three-way interaction as predicted ($B = -.59$, $SD=.31$, $p < .10$) Specifically, teams with large proportions of high PAO members and of high LGO members are associated with more errors when only few rare-find people on the team; but the same types of teams have the lowest error rate when more rare-find people on board. We also found that task relevant information elaboration partially mediated the three-way interaction relationship with errors (indirect effect = $-.10$, with 95% CI [$-.36$, $-.003$]).

Our study advances understanding of the paradox between error avoidance and learning. Empirically, we investigate whether and how certain team configuration and team processes help teams find a balancing act between error avoidance and learning in reducing errors. Theoretically, we explore a new mechanism – a combination of three structural factors - that explains why certain team can excel at both avoiding errors and learning from them. This is an interesting finding because it extends the dialectic perspective (Bledow, Frese, Anderson, Erez, & Farr, 2009) by showing how the paradox between two tensions is solved by a third factor. Finally, by identify a team process as mediator that channels the influence of the structural factors on team errors, we open new research avenues to integrate both structural and contextual approaches to paradoxes in general and to errors in particular (Lei et al., 2016).

Figure 1

The role of avoidance and learning dual goal orientation team members in reconciling the tension between avoidance and learning goal orientation members



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Running Head: Regardful Relationships

Bringing Carl Rogers Back In: Exploring the Power of Positive Regard at Work

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Running Head: Regardful Relationships

Bringing Carl Rogers Back In: Exploring the Power of Positive Regard at Work

Abstract

We draw on Carl Rogers' client-centered therapy theory and the theoretical lens of positive work relationships to explain why and how positive regard can be a powerful source for the development of employees' sense of vitality, job performance and organizational citizenship behaviors (OCBs). We theorize that when employees experience relationships characterized by a high level of regard with their co-workers they are likely to develop a sense of vitality, which in turn results in enhanced job performance and OCBs. These relationships are examined in both experimental and field studies. The results of these multiple studies provide general support for the power of positive regard in augmenting a sense of vitality and enhancing both job performance and citizenship behaviors.

Keywords. Positive regard, positive work relationships, vitality, performance, citizenship behaviors.

Relationships form the fabric of human (Berscheid, 1999) and organizational life (Eby & Allen, 2012) and provide “a rich new interdisciplinary domain of inquiry” (Ragins & Dutton, 2007, p. 3). Relationships can be high quality or corrosive in nature, and have a significant impact on individuals, groups and organizations (Dutton, 2003). Whereas psychologists have long underscored the key role of interpersonal relationships in fulfilling various needs such as the need to belong (Baumeister & Leary, 1995) and achieving personal growth and life satisfaction (Berscheid, 1999; Reis & Gable, 2003), there is a need for more research on how relationships can be translated into desired behaviors and performance outcomes (Ragins & Dutton, 2007). This is crucial given the increasing recognition on the part of managers of the importance of interpersonal relationships for creating effective work environment (Beauregard, 2010).

In attempts to unpack the essence of interpersonal relationships at work, most studies have drawn on social exchange theory (Blau, 1964; Homans, 1958) to explain why and how reciprocal relationships, which involve a series of interactions that generate obligations (Emerson, 1976; in Cropanzano & Mitchell, 2005, p. 874), emerge and influence employees’ behaviors and performance. However, studies have shown that various types of relationships can be formed in the workplace, including friendship and mentoring (Campbell & Campbell, 2012). More importantly, not all relationships are reciprocal in nature; they can also be generative and life-giving (Baker & Dutton, 2007; Dutton & Heaphy, 2003; Ragins & Dutton, 2007; Stephens, Heaphy, & Dutton, 2011).

Following this line of thinking, we focus here on *regardful relationships* (Rogers, 1951) which we see as humane and generative in nature. Unlike relationships in which people cater to their self-interests when interacting with others (Blau, 1964), regardful relationships are characterized by unconditional acceptance and love (Rogers, 1951, 1957). Generative work relationships serve “as a force that propels and motivates actions” (Dutton & Workman

2012, p. 402); they are “endogenously resourcing individuals” (Carmeli, Dutton, & Hardin, 2015, p. 1022). This form of relationships enables people to tap vital resources (Ragins & Dutton, 2007) and engage in work behaviors (Owens, Baker, Sumpter, & Cameron, 2016).

This article aims to contribute to this emerging stream of research by expanding on a theoretical perspective that views relationships as more humanizing, non-judgmental, and generative in nature (Ragins & Dutton, 2007). By humanizing we refer to interactions in which a participant sends a message of positive regard to another person such that he or she affirms the other person’s self and worth as a human being. Specifically, we direct attention to the concept of positive regard, which was originally developed by Rogers (1951) to characterize genuine relationships between therapists and patients in which therapists develop a non-judgmental approach towards patients that cultivates a sense of acceptance.

Rogers (1957) considered positive regard as a necessary condition for an effective therapeutic relationship to unfold.. Dutton and Heaphy (2003) suggested that when people are in high quality connections in the workplace they experience a high level of positive regard (Rogers, 1951). Stephens et al. noted that “being regarded positively denotes a sense of feeling known and loved, or being respected and cared for in a connection” (2011, p. 386). Experiencing positive regard signals a sense of acceptance by others who play a significant role in these people’s lives which contributes to their sense of vitality and thereby facilitates behaviors and enhances outcomes (Rogers, 1951).

Our focus here is on *level of regard* which is conceptualized in terms of being liked or loved (not intimately) by other members in a social group and thus developing a sense of inclusion (Rogers, 1951, 1957). People spend many hours at work and seek purpose and meaning there (Dik, Byrne, & Steger, 2013) and one key ingredient of their experience is associated with the relationships they build with others in at work. As Sandelands and Boudens pointed out, “When people talk about work they talk primarily about other people.

They talk about relationships” which are the key shaping mechanism of feelings at work (2000, p. 50). How one feels at work, in turn, influences one’s behaviors and outcomes (Brief & Weiss, 2002). We propose and test a conceptual model, shown in Figure 1, which posits that when experiencing a high level of regard between co-workers, people develop a sense of vitality which in turn drives both job performance and organizational citizenship behaviors.

----Insert Figure 1 about here----

The Importance of Positive Regard in the Workplace

Carl Rogers developed a theory of personality development grounded on the assumption that every human being has a natural tendency to self-actualize; i.e., to fulfill his or her potential and achieve goals, wishes, and desires in life (Rogers, 1951, 1957, 1989). However, the process leading to personality development depends upon the presence of optimal environmental conditions that allow people to fulfill their potential and, ultimately, grow. Rogers suggested that an optimal environment is cultivated when one person develops a non-judgmental approach towards the other person. This takes place when an individual experiences a sense of positive regard in his or her social context in which there is an enduring sense of acceptance, value and warmth;. Positive regard demarcates the presence of a *growth-fostering relationship* in which prejudices and preconceptions are avoided and people maintain a reciprocal positive outlook and show humanity, companionship, and compassion towards each other (Rogers, 1951, 1957). We suggest that regardful relationships do not only emerge in the non-work domain, but also in organizations. Organizations provide a rich social context in which people can fulfill vital psychological needs, and realize their full potential.

Positive Regard and Cognate Concepts

A number of cognate constructs share conceptual facets with positive regard, including perceived organizational support, trust, leader-member exchange (LMX), and

social support. To better differentiate these constructs from positive regard, they are summarized in Appendix A. Perceived organizational support captures employees' general beliefs regarding the organization's support for its members (Rhoades & Eisenberger, 2002, p. 698). By contrast, positive regard focuses on the general way in which individual members, whether colleagues or leaders, treat others in the organization. Positive regard is also distinct in this sense from LMX, which focuses solely on leader-subordinate relationships characterized by mutual respect, obligation, and trust (Graen & Uhl-Bien, 1995). In addition, there is a difference between positive regard and interpersonal justice, which refers to the respect and concern authorities show employees who are affected by their decisions (Greenberg, 1993, p. 85). Whereas positive regard focuses on relational connections between individuals, interpersonal justice refers to treatment from authorities in the organization. Positive regard also differs from social support in organizations which can be informational, instrumental, emotional, or in the form of social companionship (Cohen & Wills, 1985). Informational support refers to helpful information and guidance that can improve individuals' ability to cope in the organization. Instrumental support refers to providing tangible resources needed for a task. Emotional support refers to empathy, encouragement, compassion, and compliments (Uchida, Kitayama, Mesquita, Reyes, & Morling, 2008). Finally, social companionship refers to "spending time with others in leisure and recreational activities" (in Cohen & Wills, 1985, p. 313). These concepts differ significantly from positive regard as they do not fully capture the idea that a person is liked or loved in a relationship, or the notion of unconditional non-judgmental ways of relating.

Hypothesis Development

In what follows, we theorize that employees who form and experience regardful relationships with their co-workers are likely to develop a sense of vitality, which in turn results in a higher level of engagement in OCBs and enhanced job performance.

Definition of Vitality

A sense of vitality refers to a feeling of positive arousal and a heightened sense of positive energy (Quinn & Dutton, 2005; Ryan & Frederick, 1997). Vitality is a discrete emotion that is characterized by both high pleasantness and high activation and energy (Russell, 1980). In this study, we focus on the unique nature of *vitality at work* and expand on Ryan and Frederick's (1997) definition of vitality as "a subjective feeling of aliveness and energy" (p. 529). We define a person's feelings of vitality as "the feeling that one is eager to act and capable of acting" (Quinn & Dutton, 2005, p. 36), and a sense of aliveness. When individuals are vital, they develop a high level of motivation to engage and perform their tasks more successfully (Thayer, 1989). This is consistent with research that has described the positive implications of vitality for both work behaviors (e.g., presenteeism; van Scheppingen, de Vroome, ten Have, Zwetsloot, Bos, & van Mechelen, 2014) and non-work outcomes (e.g., health; Richman, Kubzansky, Maselko, Ackerson, & Bauer, 2009).

Vitality nevertheless differs from its cognate concepts of vigor, thriving, and resilience. Vitality represents feelings of aliveness and positive energy (Ryan & Fredrick, 1997), whereas feelings of vigor reflect physical capabilities, the ability to express sympathy and empathy to significant others, and flow of thought process and mental agility (Shirom, 2011). One can act vigorously but do not necessarily develop a sense of aliveness and be positively energized to act (e.g., vigorously seeking a revenge). Thriving at work has been defined as a subjective experience of learning and aliveness (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005); therefore, vitality constitutes only one dimension of thriving. Resilience is the tendency to maintain high levels of positive affect and well-being in adverse conditions (Davidson, 2000; Ong, Bergman, Bisconti, & Wallace, 2006), whereas vitality captures the feelings of aliveness and energy, not necessarily in adverse situations.

Positive Regard and Vitality

Scholars have pointed out that vitality stems from positive and meaningful relational connections with others (Miller & Stiver, 1997). Consistent with this viewpoint, we elaborate on why a high level of regard with one's co-workers is likely to engender a sense of vitality at work.

Researchers have argued that individuals have a fundamental need to feel included and avoid a sense of exclusion from social groups they care about (Ainsworth, 1989; Baumeister & Leary, 1995). In the workplace, social inclusion captures the extent to which employees have informal social ties with others at work and feel that they belong and are socially included by other members (Pearce & Randel, 2004). One key manifestation of social inclusion is *perceived liking* (Baumeister & Leary, 1995) that arises from respectful interactions (Ellemers, Doosje, & Spears, 2004), which signal positive regard in a way that affirms the other person in the connection (Dutton, 2003; see also Carmeli, Dutton, & Hardin, 2015). This notion has been developed in interpersonal models of social groups (Smith, Tyler, Huo, Ortiz, & Lind, 1998; Tyler & Blader, 2000; Tyler & Lind, 1992) as well in the social valuing perspective (Dutton, Debebe, & Wrzesniewski, 2015) which emphasizes the influence of quality (i.e., respectful) interpersonal treatment on individuals' perceptions and behaviors (see Huo, Binning, & Molina, 2008, 2010).

We build on this body of literature and suggest that when individuals form regardful relationships with their co-workers there is a clear signal of warmth and a sense of liking in the connection, such that their need for social inclusion is answered. We specify two pathways to explain why social inclusion that arises from regardful relationships engenders a sense of vitality. First, as suggested by the socially embedded model of thriving at work, vitality is deeply rooted in social systems (Spreitzer et al., 2005). Research indicates that positive work relationships can be an energizing force that 'propels one's actions' (Dutton, 2003; Quinn & Dutton, 2005; see also Ragins & Dutton, 2007). Research has specified

concepts such as relational energy (defined as “a heightened level of psychological resourcefulness generated from interpersonal interactions that enhances one’s capacity to do work”) to show how relational interactions can be an energizing resource prompting individuals to engage at work (Owens et al., 2016, p. 37; see also: Dutton, 2003; Quinn, Spreitzer, & Lam, 2012). Through this relational process, they accumulate greater energy (Brown, Nesse, Vinokur, & Smith, 2003).

This is also consistent with the social valuing perspective (Dutton et al., 2015) which posits that when people sense that they are valued in their relationships with others it enables them to develop positive meaning (Wrzesniewski, Dutton, & Debebe, 2003) and affirm their self-conception, all of which are crucial for one’s sense of feeling vital. Taken together, the social inclusion that arises from regardful relationships engenders a sense of vitality through a process of resource production and positive meaning.

Hypothesis 1: There is a positive relationship between positive regard and employees’ sense of vitality.

Vitality and Employee Performance

We posit that vitality is likely to enhance both job performance and OCBs. Job performance refers to the extent to which people complete their job assignments efficiently and effectively. OCB is defined as an “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in aggregate promotes the effective functioning of the organization” (Organ, 1988, p. 4). In Studies 1 and 2, we focus on what Williams and Anderson (1991) termed organizational citizenship behavior-organization (OCB-O) which captures individual discretionary “behaviors that benefit the organization in general” (pp. 601-602). In Study 4, we expanded our examination to also include OCB-I which captures behaviors directed towards individuals.

We reason that when individuals feel a sense of vitality at work, they are more likely to perform their job successfully and engage in citizenship behaviors that benefit the entire organization. People with a sense of vitality are likely to report lower levels of burnout (Vallerand, Paquet, Philippe, & Charest, 2010), develop strong organizational commitment (DeJoy, Della, Vandenberg, & Wilson, 2010), feel more psychologically safe and involved in creative behaviors (Kark & Carmeli, 2009), act agilely (Dries, Vantilborgh, & Pepermans, 2012), and achieve higher levels of performance (Paterson, Luthans, & Jeung, 2014).

More specifically, our theorizing draws on the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 1998, 2001) which suggests that positive emotions broaden individuals' thought-action repertoire, and drive them to pursue a wider range of paths of thought and (Fredrickson, & Branigan, 2005). That is, vitality can help employees build a range of personal resources that can be further utilized to complete work assignments successfully, as well as engage in altruistic behaviors that contribute to the organizational system.

Employees who develop a sense of vitality are also likely to expand and accumulate physical, and psychological (emotional and cognitive) resources and “to personally engage at a particular moment” (Kahn, 1990, p. 714), which can be instrumental in enhancing both job performance and OCBs. Consistent with the Broaden and Build Theory of Positive Emotions (Fredrickson, 1998, 2001), we made the assumption that the psychological state in which individuals feel positive arousal enables them to think about new opportunities to better complete their tasks. When developing a sense of vitality, individuals are likely to push the boundaries and take on complex and challenging tasks. In a similar vein, a sense of vitality is likely to make employees feel more invigorated to make a unique contribution to the organization and its members. This is consistent with research and theory that link positive emotions and prosocial behaviors (Carlson, Charlin, & Miller, 1988), suggesting that positive

moods lead people to perceive stimuli in a more positive light such that they see others (e.g., co-workers) and the organization in a more favorable way; this favorable perspective drives them to seek opportunities to help and contribute.

Hypothesis 2: There is a positive relationship between employees' sense of vitality and both (a) job performance and (b) organizational citizenship behaviors (OCBs).

The Mediating Role of Vitality

In line with our first two hypotheses, we posited that positive regard has an indirect influence on both job performance and OCBs, through vitality. Our theoretical anchors, as explained above, suggest that regardful relationships are humane and generative in nature and as such respond to the fundamental need of social inclusion. When employees feel that they are liked and loved in connections with other organizational members they feel valued and accepted, develop positive meaning, and affirm their self-concept – which are keys to engendering positive arousal. Taken together, a heightened level of positive energy is likely to be a powerful psychological force for people's engagement in citizenship behaviors and contributes to their capacity to perform tasks effectively (Dutton, 2003).

Hypothesis 3a: There is an indirect relationship between positive regard and job performance, through employees' sense of vitality.

Hypothesis 3b: There is an indirect relationship between positive regard and organizational citizenship behaviors (OCBs), through employees' sense of vitality.

Overview of Studies

We conducted three studies to examine our conceptual model. In Study 1, we used a field design to examine the hypothesized relationships between positive regard, vitality, and both job performance and OCB-O. In Study 2, we used an experimental design to provide further validation for our findings in a controlled environment. In Studies 3 and 4 we used an experimental design to further examine the proposed causal.

Study 1, Method

Sample and Procedure

This study is part of a larger research project designed to examine our model and hypotheses in salespeople in a franchise of a multinational company in the beverage industry. At the time the data were collected this franchise firm employed 150 salespeople who reach out to customers such as restaurants, grocery stores, and supermarkets. We received a list of all full-time salespeople and their direct managers from the HRM director and structured two surveys: one for the employees and the other for the managers administered four months later. This procedure of using different data sources allowed us to minimize potential response biases. Prior to administering the surveys, we conducted a pilot study and a professional copy editor translated the items from their original English language versions and then back-translated these items into English following Brislin's (1986) guidelines. The pilot study aimed to ensure construct validity and the clarity of the items. This process yielded minor modifications in the survey. We then sent a letter with the University logo signed by two researchers to all potential participants in which we described the research goals in general, which were to examine dynamics in the workplace and individual work experiences. We administered the questionnaires to the employees in a ballroom to which only the authors had access, and promised full confidentiality. We hired three staff members to help us answer any questions related to the paper and pen questionnaire which was administered and collected on site by the research team. Four months later, in an executive meeting of the marketing division, we asked the direct managers to complete a short survey to evaluate the performance of the salespeople in their supervised group. We collected responses from 132 (a response rate of 88 percent) employees and 12 managers (all the managers agreed to provide their assessment). Twenty-three percent of the respondents were male, and about 71 percent were not living with a partner. About 44 percent of the

respondents had an academic degree. Their average age was 26.61 years (SD 3.74), and their tenure in the organization was 1.75 years SD. 1.88).

The measures and analytical approach are described in Appendix D1.

Study 1, Results

Table 1 presents the descriptive statistics and correlations among the study variables. Positive regard was positively associated with vitality ($r = .66, p < .01$), job performance ($r = .23, p < .01$), and OCB-O ($r = .18, p < .01$). Vitality was related to both job performance ($r = .33, p < .01$) and OCB-O ($r = .17, p < .05$). We tested for multicollinearity between positive regard and vitality by assessing the VIF measure, which was 1.762, and hence less than 10, reducing multicollinearity concerns.

----- Insert Table 1 about here -----

Table 2 summarizes the model results for the relationships of positive regard → vitality → job performance, and Table 3 summarizes the model results for the relationships of positive regard → vitality → OCB-O. In all the analyses, we included gender, age, tenure in the organization, and education as control variables.

----- Insert Table 2 and Table 3 about here -----

As shown in Table 2 and Table 3, with vitality as the dependent variable, the regression coefficient for positive regard was significant with 95% credibility interval (.68, $p < .01$; CI (95%) = [.5, .75]), indicating a reliably significant effect, thus lending support to Hypothesis 1. When considering the effect of both positive regard and vitality on job performance (Table 2), only vitality had a significant coefficient (.42 $p < .05$) with a 95% credibility interval (.02, .74), whereas the direct effect of positive regard on job performance was not significant since the 95% estimated credibility interval crossed zero (-.35, .33). The specific indirect effect of positive regard on job performance through vitality (.3) was statistically significant since the 95% estimated credibility interval did not include zero (.01,

.48). This supported Hypothesis 2a (linking vitality and job performance) and Hypothesis 3a (mediation effect of vitality on the relationship between positive regard and job performance). We performed the same analysis with OCB-O (Table 3) while considering the influence of both positive regard and vitality. Hypothesis 2b predicted that vitality would be positively correlated with OCB-O and Hypothesis 3b predicted a mediation effect of vitality on the relationship between positive regard and OCB-O. We found a significant influence of vitality on OCB-O (.5, $p < 0.05$). The specific indirect effect of positive regard on OCB through vitality (.34) was significant as well ($p < 0.01$), thus supporting Hypothesis 2b and Hypothesis 3b. We provide supplementary analysis regarding a potential competing hypothesis in Appendix D1.

Study 1, Discussion

The findings of Study 1 provide preliminary evidence for the indirect influence of positive regard on both job performance and OCB-O, through a sense of vitality. This study was not without limitations. A noteworthy strength of Study 1 was that the data were collected from sales people and their managers (multisource data) and this field design helped enhance the external validity of the findings. We used structured surveys to collect the data. In cases like these, common method bias can often distort the interpretation of the results (e.g., Doty & Glick, 1998). However, this bias is apparently less severe when using time-lagged data and different sources to measure the explanatory and outcome variables (Podsakoff, MacKenzie, & Podsakoff, 2012). Scholars have suggested that researchers should test their hypotheses in the field to ensure external validity, as well as in experimental settings to ensure internal validity (Van den Bos, 2001). Postman (1955) argued that experiments are desirable to test the implications of a theoretical proposition. Berkowitz and Donnerstein (1982) further suggested that lab experiments should deal mainly with causal hypotheses.

Following this line of thinking, we conducted a lab study (Study 2) to address some of the limitations of Study 1.

Study 2, Method

Participants

Ninety-three adult participants residing in the USA were recruited using Amazon's Mechanical Turk survey platform, which has been increasingly employed by scholars from different fields (Buhrmester, Kwang, & Gosling, 2011). To further insure the reliability of the data, we also included filler task that enabled us to determine whether the participants were fully engaged. In addition, we also included certain thresholds such as assessing their fluency in English, the number of surveys they had already completed (below 50), and the percentage of approved surveys (above 95%).

The participants were paid one US dollar for a completed survey. Fifty-four participants were women (58.1%), 45 (48.4%) were married, and their educational level ranged from high school diploma (14%), B.A. (67.7%), M.A. (14%) to Ph.D. (4.3%). The average age of the participants was 34.97 (SD = 10.66). Fifty-nine percent of the participants reported earning the average income, while 28% and 12.9% reported below and above average incomes respectively. The sample was ethnically diverse: 71% were European American, 7.5% Hispanic, 11.8% African American, 2.2% Native American, 3.2% Asian, 1.1% Middle Eastern, and 3.2% reporting another ethnicity.

Participants were randomly assigned to one of the two conditions: 1) High level of regard from co-workers (N = 49); and 2) Low level of regard from co-workers (N = 44).

Procedure and Task

After providing their consent, participants were asked to read their assigned scenario in which co-workers in the organization conveyed a high or low level of regard (see Appendix B). They were asked to reflect on the scenario, after which they filled in a filler

task and then completed the manipulation check questions. The second and third parts of the survey were used to collect data on the mediator and the dependent variables. The respondents also completed filler tasks between the three parts of the survey to reduce potential order effects.

The measures and analytical approach are described in Appendix D2.

Study 2, Results

Hypothesis testing. To examine our hypotheses, we conducted the analyses in two phases: analysis of variance (ANOVA), and mediation analysis using a conditional process analyses program, PROCESS (Hayes, 2013).

Vitality. We posited that recipients of a high level of regard would feel a greater sense of vitality than those experiencing a low level of positive regard. Using a two-way ANOVA (condition: high/low level of regard), we found that the predicted main effect was statistically significant, $(F(1, 91) = 164.2, p < 0.001)$. Table 4 also presents the means and s.d. for job performance under conditions of low and high level of regard. The results showed that recipients of a high level of regard reported a high level of vitality, as compared to those who experienced a low level of regard. This supported our hypothesis concerning a positive link between level of regard and vitality at work.

Job performance. The results of a two-way (condition: high/low level of regard) ANOVA indicated that recipients of a high level of regard reported higher levels of job performance, as compared to those who experienced a low level of regard from their co-workers $(F(1, 91) = 19.88, p < 0.001)$. Table 4 also presents the means and s.d. for job performance under conditions of low and high levels of regard.

OCB. A two-way (condition: high/low level of regard) ANOVA indicated that recipients of a high level of regard reported higher levels of OCB, as compared to those

experiencing a low level of regard ($F(1,91) = 11.41, p < 0.01$). Table 4 also presents the means and s.d. for OCB-O under conditions of low and high levels of regard.

----- Insert Table 4 about here -----

Mediation analysis. The mediation hypotheses were tested using a conditional process analysis program, PROCESS, which computes ordinary least square regressions to test for direct and indirect effects (Hayes, 2013). Specifically, we employed PROCESS Model 4 to estimate regression coefficients and performed bootstrap analyses with 10,000 bootstrap samples to estimate the 95% bias corrected confidence intervals for specific and total indirect effects. Table 5 summarizes the model results for the relationships of positive regard \rightarrow vitality \rightarrow job performance, and Table 6 summarizes the results for the relationships of positive regard \rightarrow vitality \rightarrow OCB-O.

----- Insert Table 5 and Table 6 about here -----

As shown in Table 5 and Table 6, with vitality as the dependent variable, the regression coefficient for positive regard was significant with 95% confidence interval (2.16, $p < .01$; CI (95%) = [1.83, 2.5]) indicating a reliably significant effect, thus lending support to Hypothesis 1. In the second step in which job performance (Table 5) was regressed on positive regard and vitality, only vitality had a significant coefficient ($.2 p < .05$) with a 95% confidence interval (.03, .38), whereas the direct effect of positive regard on job performance was not statistically significant; i.e., the 95% estimated confidence interval crossed zero (-.27, .42). The specific indirect effect of positive regard on job performance, through vitality (.45) was statistically significant since the 95% estimated confidence interval did not include zero (.01, .89). This supported both Hypothesis 2a (linking vitality and job performance) and Hypothesis 3a (indirect relationship between positive regard and job performance, through vitality). We performed the same analysis with OCB-O regressed on positive regard and vitality. The results in Table 6 indicated that when OCB-O was regressed on positive regard

and vitality, only vitality had a significant coefficient ($.30 p < .05$) with a 95% confidence interval (.11, .49), whereas the direct effect of positive regard on job performance was not statistically significant in that the 95% estimated confidence interval included zero (-.62, .39). The specific indirect effect of positive regard on job performance through vitality (.65) was statistically significant since the 95% estimated confidence interval did not include zero (.21, 1.17). This supported both Hypothesis 2b and Hypothesis 3b.

Study 2, Discussion

This experimental study was designed to provide a further examination of our conceptual model in a more controlled paradigm. Although the internal validity was established, this study did not address external validity issues. This study provided further, yet not complete, evidence to support the hypothesized relations and their direction. The findings should be replicated with alternative operational definitions of the study constructs with other samples (Kruglanski, 1976). An important limitation was that job performance and OCB were assessed using self-reports rather than being externally evaluated. Another potential limitation was the demand characteristics, due to the scenario manipulation of level of regard. However, it is less likely that this effect could have affected psychological experiences such as vitality. Moreover, the level of regard manipulation related to co-worker relationships, whereas job performance and OCB concern behaviors towards the organization or others, respectively; this provides some further confidence that the potential bias of demand characteristics was mitigated.

Studies 3 and 4, Overview

Studies 3 and 4 used an “experimental causal chain design” (Spencer, Zanna, and Fong, 2005, p. 846) to provide a more powerful way to examine the psychological process by manipulating both the independent variable (Study 3) and the mediating variable (Study 4). Spencer et al. (2005) argued that this approach allows strong inferences about the causal

chain of events. This approach is becoming more popular in experimental research and has recently been advocated by several organizational and psychology researchers (Eden, Stone-Romero, & Rothstein, 2015). In these studies, we used different panel data to increase the generalizability of the findings. Furthermore, in Study 4, both job performance and OCB-O were assessed with objective measures to reduce the possible mitigation of validity due to demand characteristics. Finally, in Study 4 we extended our examination of the influence of vitality on OCBs by investigating both OCB-O and OCB-I as the outcome variables.

In Study 3, we used a scenario manipulation to elicit high and low levels of co-workers' positive regard, after which we measured the participants' level of vitality. In Study 4, we manipulated vitality as the mediating mechanism using a scenario manipulation, after which participants' level of performance and OCB were assessed.

Study 3, Method

Participants

Eighty-seven adult participants were recruited via the Prolific Academic survey platform. When assessing this platform, scholars have found it corresponds to a source of reliable data (Peer, Brandimarte, Samat, & Acquisti 2017). All the participants had completed fewer than 50 surveys through this platform and had an approval rate of above 90%. The participants were paid 1.00 GBP. Fifty participants were women (57.5%), 31 (35.6%) were married. The educational level of the respondents ranged from a high school diploma (16.1%), B.A. (63.2%), M.A. (18.4%) to Ph.D. (2.3%). The average age of the participants was 35.73 (SD = 11.93), and 39.1% reported an average income, while 44.8% and 16.1% reported below and above average incomes respectively. About 89.7% of the respondents were white, 1.1% Hispanic, 1.1% African American, and 8% Asian.

The participants were randomly assigned to one of the two conditions: Condition 1 – High level of positive regard from co-workers (N= 44) and Condition 2 – Low level of positive regard from co-workers (N=43).

Procedure and Task

After providing their consent, participants were asked to read and reflect on the assigned scenario used in Study 2. Then they reported their vitality levels. Finally, they filled in the manipulation check questions which aimed to insure proper manipulation of level of regard from co-workers that had already been established and employed in the previous study.

The manipulation check and measure are described in Appendix D3.

Study 3, Results

Manipulation check. The analysis indicated that the co-workers' positive regard manipulation was successful. Participants in the low positive regard condition rated co-workers' positive regard level as lower ($M=1.24$, $SD=0.44$) than participants in the high positive regard condition ($M = 4.76$, $SD = 0.38$), $F(1,85) = 1610$, $p < .001$.

Hypotheses testing. To examine the first hypothesis, we conducted an analysis of variance (ANOVA).

Vitality. We posited that participants who experienced a high level of regard in their relationships with their co-workers would feel a greater sense of vitality than those experiencing a low level of positive regard. Using a one-way ANOVA (condition: high/low level of regard), the predicted main effect was statistically significant, ($F 1, 85) = 971.9$, $p < 0.001$. Table 7 also presents the means and s.d. for vitality under conditions of low and high level of regard. The results indicated that those who experienced a high level of regard reported a higher level of vitality than those who experienced a low level of regard. This supported our first hypothesis.

----- Insert Table 7 about here -----

Study 4

We first conducted a pilot study to validate the Study's manipulation procedure which showed that participants in the high level of vitality condition in the experimental scenario reported a higher level of vitality at work ($M = 4.05$, $SD = 0.81$) than participants in the low level of vitality condition ($M = 2.73$, $SD = 1.07$), $t(85.88) = 6.714$, $p < .001$. As in Study 1, we used the items employed by Carmeli (2009) ($\alpha = .96$).

Study 4, Method

Participants

Ninety-six adult participants were recruited using the Prolific Academic survey platform. All the participants had completed fewer than 50 surveys through this platform and had an approval rate of above 90%. The participants were compensated 1.00 GBP. Fifty-two participants were women (54.2%), 44 (45.8%) were married, and their educational level ranged from high school diploma (15.6%), B.A. (56.3%), M.A. (25%) to Ph.D. (3.1%). The average age of the participants was 34.43 ($SD = 9.06$). About 83.3% of the respondents were white, 1% Hispanic, 6.3% African American, and 5.2% Asian.

The participants were randomly assigned to one of the two conditions: Condition 1 = High level of vitality ($N = 46$); and Condition 2 – Low level of vitality ($N = 49$).

Procedure and Task

After providing their consent, participants were asked to read their assigned scenario in which they experienced a high or a low level of vitality in a fictitious organization (see Appendix B). They were asked to reflect on the scenario. They were then asked to perform a task as employees of the fictitious company, which included advising the company on whether or not to open restaurants based on criteria adapted from the IS World Task Repository (Mennecke & Wheeler, 2012) (see Appendix D4). Prior to completing the task,

we showed the participants several examples and explained what was required of them. After completing the task, the participants were asked to assess their performance and report their level of OCB. Finally, they filled in manipulation check questions, to insure proper manipulation of co-worker positive regard that had already been validated in the pilot study.

The manipulation check and measures are described in Appendix D4.

Study 4, Results

Manipulation check. The results indicated that the level of vitality manipulation was successful. Participants in the low vitality condition rated co-workers' vitality level as lower ($M=2.78$, $SD=1.18$) than participants in the high vitality condition ($M = 4.07$, $SD = 0.69$), $t(78.03) = 6.518$, $p < .001$.

Relationships among the dependent variables. The inter-correlations among the variables are presented in Table 8. Task performance was significantly related to self-ratings of performance ($r = 0.36$, $p < .01$). Self-rated performance was significantly related to OCB-I, ($r = 0.44$, $p < .01$), and OCB-O ($r = 0.42$, $p < .01$). Finally, OCB-I was significantly related to OCB-O ($r = .61$, $p < .01$).

----- Insert Table 8 about here -----

Hypothesis testing. As a test of the second and third hypotheses, the effects of vitality on job performance and OCB-O were examined using a multivariate analysis of variance (MANOVA). A MANOVA with vitality as a between-subjects factor, and the two performance measures as well as OCB-O and OCB-I scales as the dependent variables revealed significant main effects for vitality, Wilks' $\lambda = .78$, $F(8, 180) 3.03$, $p < .01$. The results of the 1 X 4 MANOVA are presented in Table 9. Univariate Fs indicated that conditions differed significantly on task performance, $F(2, 93) = 6.12$, $p < .003$, $\eta^2 = .12$, performance self-ratings, $F(2, 93) = 4.3$, $p < .016$, $\eta^2 = .09$, OCB-O, $F(2, 93) = 4.1$, $p < .02$,

$\eta^2 = .08$, , and on OCB-I, $F(2, 93) = 3.91$, $p < .02$, $\eta^2 = .08$. These results supported Hypotheses 3 and 4.

----- Insert Table 9 about here -----

Studies 3 and 4, Discussion

These experimental causal chain studies were designed to provide greater confidence in the validity of the causal relations and vitality as a mediating mechanism. They replicated the results using objective measures of the study outcome variables on other samples as Kruglanski (1976) advocated. In these studies, a third participant pool was used to extend the generalizability. Finally, we extended our examination of the influence of vitality on citizenship behaviors by assessing its influence on both OCB-O and OCB-I.

General Discussion

We sought to theorize about the importance of positive regard in augmenting vitality, and thereby enhancing both job performance and OCBs. The findings from a set of studies lend general support to the indirect influence of co-workers' positive regard, through vitality, on both job performance and OCBs. In so doing, we attempted to contribute to the literature by integrating relational theories (Dutton et al., 2015; Ragins & Dutton, 2007; Smith et al., 1998; Tyler & Blader, 2000; Tyler & Lind, 1992), positive emotions (Fredrickson, 1998, 2001) and both task- and pro-social behaviors (Organ, 1997).

Our work extends research on workplace relationships by focusing on a particular form of relational connection in which people experience a high level of regard while interacting with their co-workers. This is theoretically important not only because the concept of positive regard has mainly been studied in psychology (Barrett-Lennard, 1962; Rogers, 1951, 1957), but also because regardful relationships constitute a humanizing rather than an instrumental connection between people at work. This endeavor informs our research and theory as we seek to develop a better understanding of the ways people interrelate at work

and make sense of this interpersonal connection (Wrzesniewski et al., 2003), as well as the ways such relationships shape people's feelings (Sandelands & Boudens, 2000) and influence behaviors (Ragins & Dutton, 2007).

We also further advance the notion of how workplace relationships can be generative (Carlsen & Dutton, 2011; Ragins & Dutton, 2007) and help produce emotional resources that enable people to engage and perform better (see also Owens et al., 2016; Quinn et al., 2015). The findings extend research that theorizes on micro-relational moves in which people in a connection can produce 'micro-moments' (Fredrickson, 2013) or 'generative moments' (Carlsen & Dutton, 2011) in which they develop a heightened sense of vitality and are more capable of engaging in discretionary, pro-social behaviors (OCB-O and OCB-I) and performing their job better. This also provides some further evidence for the notion that micro-moves can be transformational and contribute to positive change (Golden-Biddle, 2014).

We further expanded on emerging research that underscores the humanizing facet of the connections between individuals (Carmeli et al., 2015; Dutton, 2003; Dutton & Ragins, 2007; Stephens et al., 2012) as a "complementary lens" to that of social exchange theory which does not capture the essence or substance of regardful relationships, but rather deals with norms of reciprocity (Blau, 1964; Cropanzano & Mitchell, 2005; Emerson, 1976; Homans, 1958; see Carmeli et al., 2015). Our focus on positive regard enabled us to integrate insights from therapeutic research (Rogers, 1951; 1957) to inform theory on the micro-moves that make work relationships meaningful and engaging in ways that allow members to affirm their self-concepts, find positive meaning, and become involved through connections they form with co-workers. We further reveal mechanisms by which regardful relationships can engender positive arousal (i.e., vitality). Specifically, we develop the notion that such humanizing relationships can address significant human needs such as social inclusion

(Baumeister, & Leary, 1995) and help explain why micro-relational moves that signal acceptance and affirm the other person in the connection can endogenously empower him or her (Carmeli et al., 2015). We believe that when one experiences love (not in the intimate sense) in a connection, this may be the highest level of unconditional acceptance, as articulated in Rogers' theory (1957).

We focused on positive regard as conveyed by co-workers. This is particularly important when we consider that coworkers influence one another and accommodate various needs of individuals at work. Kipnis, Schmidt, and Wilkinson (1980) found that coworkers use influence fellow employees for several reasons, such as performance improvement as well as change initiation. Thus, by conveying positive regard, coworkers can have a substantial influence on their fellow employees' behaviors by helping them to develop "generative moments" (Carlsen & Dutton, 2011; Fredrickson, 2013) and how best to utilize these vital resources (Ragins & Dutton, 2007). Coworkers should realize that small acts that convey positive regard can make a considerable difference in people's lives at work. We know that coworkers influence their colleagues to obtain personal benefits or to satisfy organizational goals (Kipnis et al., 1980), but studies have seldom directed careful attention to their relational and psychological needs. Our findings draw attention to relational dynamics and how they help satisfy organizational members' inclusion needs.

Our research also has some useful implications for practice. The findings shed further light on the importance of positive regard at work, which may help managers design and shape a nurturing relational space that instills a sense of vitality, and enhance performance at work. A key managerial challenge is how leaders and followers can shape and develop positive work relationships in which people are liked and accepted for who they are. If we embrace the notion that workplaces can be a way to engender a sense of vitality and aliveness, we can expect to learn about practices that help develop this fertile socio-

psychological context. From an organizational point of view, these micro-foundations can shed new light on why some organizations are more effective in fulfilling their members' human capital and achieving a competitive position in the market.

Limitations and Future Research Directions

We used three research designs that complemented each another (Sackett & Larson, 1990; Spencer, Zanna, & Fong, 2005). We first conducted a field study (Study 1) that helped establish external validity. Clearly, the generalizability of our findings should be interpreted with caution since we examined our conceptual model on salespeople in a specific company. In Study 2, we used an experimental design that allowed us to address the potential internal validity of the hypothesized causal relationship, which, to our knowledge, has thus far not been explicitly examined. Future research could benefit from exploring this type of relationship through different methodological approaches across various contexts. In Studies 3 and 4, we manipulated and measured vitality as a proposed psychological process in a series of experiments, thus reinforcing the causality of the hypothesized causal chain (Spencer et al., 2005; Eden et al., 2015).

It is plausible that high performing employees are more likely to report high positive regard from their co-workers, whereas low performers may develop a defensive orientation and report a low level of regard from other members. Theoretically, it may well be that a high performer is also loved and liked in the workplace. However, this is not necessarily the case, particularly in our context of level of regard between salespeople who often compete for resources and benefits. Even in other settings, one should not assume that high performers are necessarily liked by others. As one member told us, "You know X is a star, but you cannot build a country with him." This may be related to the social skills of a member such as in the case of the star performer who could not form warm relationships with his colleagues, or the fact that often, there are feelings of jealousy and envy towards high achievers. Study 2, in

which we manipulated high and low levels of regard, attempted to respond to this issue. Nevertheless, we encourage further research that systematically controls for potential differences across high and low performers.

Further studies are needed to explore unobserved variables that may provide alternative explanations for the links between positive regard, vitality, and performance. Research should ascertain the power of regardful relationships between co-workers as well as between leaders and followers, and even between employees and customers. Co-workers may not play a formal role in creating such an environment. However, it is our assumption that all individuals, formally or informally, seek to create an environment in which they and others can experience life-giving relationships. Thus, further research should investigate the conditions in which formal and informal leadership can help develop such nurturing workplace relationships. We particularly advocate research on leader micro-relational moves and their influence on followers' attitudes and outcomes. In Study 1, we alluded to identification and vitality as competing explanations for people's performance behaviors. This may suggest, although our findings did not support this notion, that identification processes and psychological states can independently affect one's performance behaviors. Scholars may also explore additional outcomes associated with an enhanced sense of vitality at work, such as the effects of creativity, initiatives and unethical behavior.

Future research could also investigate boundary conditions of the relationship between positive regard and vitality. Individual differences and contextual factors such as pro-social motivation and organizational climate could help further unpack the effects of positive regard. Another limitation of the present study concerns the mechanism of social inclusion we specified for linking positive regard and vitality. People may vary in their need for social inclusion as much as they vary in other needs in their lives. However, as human beings we are all socially wired individuals who have the basic need for inclusion. Further

studies could extend our model to examine whether positive regard is more or less crucial for those who develop different needs for social inclusion.

In particular, future research is needed to better understand how positive regard is developed in the workplace and other domains. For example, following theorizing about micro-moments of positive psychological experiences, the potential of micro-moves such as acts of gratitude or compassion may help cultivate regardful relationships. Thus, exploring the antecedents of regardful relationships and how leaders and coworkers can develop and strengthen these ways of relating in the workplace can help extend theories of workplace relationships.

Conclusion

The question of what drives employee behaviors is fundamental in management. We presented a new perspective that calls upon organizations and leaders to move away from seeing workplace relationships as instrumental and embrace a more humanizing approach to the ways people relate to each other and experience these connections. We show that when experiencing a high level of regard employees develop a sense of vitality and engage in citizenship behaviors as well as perform their jobs well. Organizations seeking to drive employee citizenship behaviors and enhance job performance need to better understand and practice the power of love and acceptance while shaping a healthy relational work environment.

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Appendix A. Positive Regard: Definitions and Differences with Cognate Constructs

Construct	Definition	Focal Relationship	Outcome Variables
Positive Regard	An enduring sense of acceptance, value and warmth, perceptions of being truly valued, respected, appreciated and loved (Rogers, 1957, 1959)	A focal employee's relationship with supervisors and co-workers in the organization	Psychological safety, and learning behaviors (Carmeli, Brueller, & Dutton, 2009); Affective attachment, psychological availability, self-efficacy and innovative behaviors (Vinarski-Peretz, Binyamin, & Carmeli, 2011); Work-home enrichment and thriving (Carmeli & Russo, 2016)
Perceived Organizational Support	"Employees' general belief that their organization values their contribution and cares about their well-being (Rhoades & Eisenberger, 2002, p. 698)	Employees' relationship with the organization	Affective commitment, organizational spontaneity, performance, withdrawal behavior (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001)
LMX	"The quality of the relationship that develops between a leader and a follower" (Gerstner & Day, 1997, P. 827)	A focal employee's relationship with supervisors	Climate (Dunegan, Duchon, & Uhl-Bien, 1992; Kozlowski & Doherty, 1989); Support for innovation (Scott & Bruce, 1994); job performance, satisfaction with supervision, overall satisfaction, commitment, role conflict, role clarity, member competence, and turnover intentions (Gerstner & Day, 1997)
Interpersonal Justice	"The principle that authorities should be respectful and polite to	Employees' relationship	Job satisfaction, OCB (Greenberg, 2011; Colquitt Scott, Rodell, Long,

	those affected by their decisions, show concern for their plight, and possibly offer apologies and regret for the negative consequences of their decisions” (Greenberg, 1993, p. 85).	with the organization	Zapata, Conlon, & Wesson, 2013) Task performance, CWB (Colquitt et al., 2013)
Social Support	“Information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations” (Cobb, 1976, p. 300).	Members’ relationship with another person	Stress (Cobb, 1976; Thoits, 1982) Health -cardiovascular disease (Johnson & Hall, 1988) Depression (Schaefer, Coyne, & Lazarus, 1981) Negative morale (Schaefer, Coyne, & Lazarus, 1981)

Appendix B. Manipulation of Level of Regard

High Level of Regard

Please read the following text.

Imagine that you have been working on a project with your teammates at "Bionextgene", a fictitious company that develops advanced solutions in the biotechnology industry. You joined Bionextgene a year ago. Your team was assigned the task of developing a complex biological compound. You and your teammates have been working on this new project for the last four months.

When you were asked to describe the experience of working with your teammates on this project, you said: "I feel my co-workers like me unconditionally. They show me a lot of respect and appreciation. I am popular among my coworkers. My relationships with my co-workers convey a sense of acceptance, value and warmth. I feel loved by my coworkers".

Low Level of Regard

Please read the following text.

Imagine that you have been working on a project with your teammates at "Bionextgene", a fictitious company that develops advanced solutions in the biotechnology industry. You joined Bionextgene a year ago. Your team was assigned the task of developing a complex biological compound. You and your teammates have been working on this new project for the last four months.

When you were asked to describe the experience of working with your teammates on this project, you said: "I don't feel my co-workers like me unconditionally. They show me little respect and appreciation. I am not popular among my coworkers. My relationships with my coworkers don't convey a sense of acceptance, value and warmth. I don't feel loved by my co-workers."

Appendix C. Manipulation of Vitality

High Level of Vitality

Please read the following text:

Imagine that you have been working at "El Gusto", a fictitious company that owns a chain of Mexican restaurants.

The El Gusto Company has decided to expand geographically and establish a chain of restaurants in cities in the northeast. The management team is in the process of selecting sites for several new Mexican restaurants to be built next year.

You joined El Gusto a year ago as an infrastructure consultant. When you were asked to describe the experience of working at El Gusto, you said:

"I have a sense of aliveness, and feelings of positive energy. I have this sense of "get-up-and-go" at "El Gusto".

Low Level of Vitality

Please read the following text.

Imagine that you have been working at "El Gusto", a fictitious company that owns a chain of Mexican restaurants.

The El Gusto Company has decided to expand geographically and establish a chain of restaurants in cities in the northeast. The management team is in the process of selecting sites for several new Mexican restaurants to be built next year.

You joined El Gusto a year ago as an infrastructure consultant. When you were asked to describe the experience of working at El Gusto, you said:

"I do not feel a sense of aliveness, and lack positive energy. I do not have this sense of "get-up-and-go" at "El Gusto".

Appendix D1. Study 1, Measures, Analytical Approach, and Supplementary Analysis

Measures

Job performance. Supervisors rated their subordinates on job performance using three items from Williams and Anderson's (1991) measure of in-role performance. Job performance was assessed by the following items: "Fulfills responsibilities specified in job description," "Performs tasks that are expected from him/her," and "Meets formal performance requirements of the job" ($\alpha = .92$).

Organizational citizenship behaviors (OCB-O). Supervisors rated their subordinates on organizational citizenship behavior toward the organization (OCB-O) using three items from Williams and Anderson's (1991) scale. This scale was selected because it examines organizational citizenship behavior that benefits the organization directly, as opposed to other measures that examine general organizational citizenship behavior. OCB-O was assessed by the following items: "Attendance at work is above the norm," "Gives advance notice when unable to come to work," and "Takes underserved work breaks" (reverse-scored item) ($\alpha = .78$). Responses were made on a five-point scale (from 1 = "not at all," to 5 = "to a very large extent"). We ran confirmatory factor Analysis (CFA) to examine whether job performance and OCB-O were distinct. The CFA indicated that a two-factor structure had a better fit with the data than a one-factor structure ($\chi^2(9) = 21.5, p < .01, CFI = .92, NFI = .98, TLI = .96, RMSEA = .07$ vs. $\chi^2(10) = 131.3, p > .01, CFI = .73, NFI = .72, TLI = .44, RMSEA = .29$).

Vitality. We used four items from Carmeli's (2009) measure of vitality at work as well as two other items that we added to more comprehensively assess employee sense of vitality. Respondents were asked to state (from 1 = "not at all," to 5 = "to a very large extent") the extent to which they felt a sense of vitality at work. Sample items are: "I am most vital when I am at work", and "I am full of positive energy when I am at work" ($\alpha = .96$).

Positive regard. We used Carmeli's (2009) four-item scale to assess level of regard one experiences in the relationships with his or her co-workers. Participants were asked to rate co-worker positive regard level in the organization. The items were: "I feel that my co-workers like me," "I get a lot of respect from my co-workers," "I am popular among my co-workers," and "I feel that my co-workers love me" ($\alpha = .91$). We ran a CFA to examine whether positive regard and vitality were distinct constructs. The results of this procedure indicated that a two-factor structure had a better fit with the data than a one-factor structure ($\chi^2(34) = 58.182, CFI = .98, NFI = .945, TLI = .96, RMSEA = .072$ vs. $\chi^2(35) = 240.843, CFI = .79, NFI = .77, TLI = .675, RMSEA = .206$).

Control variables. We controlled for employees' gender (1 = Female, 0 = Male), age, tenure in the organization, and educational level since there may be differences in the way female and male employees are perceived in terms of the value they contribute and generate. We also controlled for these variables because they may account for variance as regards job performance and OCB-O. For example, more tenured employees may develop deep-level knowledge of work processes and thus can perform their work better. Similarly, educated employees have higher human capital which is crucial to achieving high work performance.

Analytical Procedure

Since all managers rated their own employees, we used intra-class correlations (Bliese, 2000) to assess whether a multilevel analysis was needed. Vitality had an ICC1 score of .16,

whereas job performance and OCB-O had ICC1 scores of .25 each. We used a series of two-level random intercept regression models for individuals in clusters to model the links between 1) positive regard to vitality, 2) positive regard and vitality to both job performance and OCB. We used M-plus (7.4) which enabled us to model these relationships, as well as the correlations between job performance and OCB-O, in addition to the correlation between the random intercepts of the same cluster (between level error correlations) simultaneously.

Our data contained 12 cluster units, which is a rather small number of independent observations for the upper level, compared to the acceptable rule of thumb (justified by simulations) of ‘at least 30 clusters’ whereas the number of individuals in a cluster was not small (mean group size = 140/12) (see Aguinis, Gottfredson, & Culpepper, 2013). This is a type of situation where Bayesian analysis is expected to perform better than Maximum Likelihood (ML) (used, for example, by the HLM program). This is because Bayesian estimation is not based on the central limit theorem, unlike ML estimation (Muthén, 2010). Moreover, the ML normality assumption is not suitable for the indirect effect parameters (see MacKinnon, 2008). Therefore, the symmetric confidence interval that ML uses is not appropriate. Instead, the Bayesian credibility interval uses the 2.5 and 97.5 percentiles of the posterior distribution, allowing for skewness (Muthén, 2010). Hence, we tested our proposed mediation hypotheses (H2a, H2b, H3a, H3b) using Bayesian estimation procedures in Mplus. Specifically, the indirect effect was iteratively estimated (5,000 iterations) using a process similar to traditional bootstrapping (Zyphur & Oswald, 2015).

For two-level models, the choice of the prior for the random intercept variance is important. Hence, we ran our models with three different priors and compared the results. We used the default Mplus prior, the uniform prior $U(0, 1/\epsilon)$ and the Inverse-Gamma (ϵ, ϵ) prior, with $\epsilon = 0.001$ following Browne-Draper (2006). We report the mode of the posterior distribution as a point estimate for model parameters when using a uniform prior $U(0, 1/\epsilon)$ because all the significance calculations from the three priors were equivalent. The Gelman-Rubin potential scale reductions (PSR) were equal or less than 1.034 for all parameters, on all runs, which is smaller than the 1.1 value suggested by Gelman et al. (2014).

Supplementary Analysis

A competing account of our findings argues that organizational identification serves as a mediator of the positive regard - performance relationship. In order to test this account, job performance was regressed on positive regard, vitality, and organizational identification. Only vitality had a significant coefficient (.48 $p < .01$) with a 95% confidence interval (.09, .087), whereas the direct effect of positive regard on job performance was not significant since the 95% estimated confidence interval crossed zero (-.35, .40). Moreover, organizational identification had no significant effect on job performance since the 95% estimated confidence interval crossed zero (-.15, .48). When job performance was regressed only on positive regard and organizational identification, organizational identification had no significant effect on job performance since the 95% estimated confidence interval crossed zero (-.09, .55). The specific indirect effect of positive regard on job performance through vitality (.32) was statistically significant in that the 95% estimated confidence interval did not include zero (.08, .59).

We performed the same analysis with OCB-O regressed on positive regard and vitality. When OCB was regressed on positive regard, vitality, and organizational identification only vitality had a significant coefficient (.44 $p < .05$) with a 95% confidence interval (.08, .08),

whereas the direct effect of positive regard on OCB-O was not significant since the 95% estimated confidence interval crossed zero (-.39, .30). Moreover, organizational identification had no significant effect on OCB-O since the 95% estimated confidence interval crossed zero (-.23, .43). When OCB-O was regressed only on positive regard and organizational identification, organizational identification had no significant effect on OCB-O since the 95% estimated confidence interval crossed zero (-.16, .50). Thus, when both organizational identification and vitality were specified as mediators, only vitality remained statistically significant.

Appendix D2. Study 2, Measures, Analytical Approach, and Manipulation Check

Measures

Manipulation check. To test our manipulation, after the scenario, the respondents were given a filler task and then asked to complete four items from the positive regard scale employed by Carmeli (2009). Respondents were asked to report on a five-item scale (from 1 = “not at all,” to 5 = “to a very large extent”) whether the work relationships with the co-workers at the fictitious organization in the scenario conveyed a sense of positive regard towards each other or a lack of thereof (they were asked to consider that they worked in the firm described in the text) ($\alpha = .98$).

Vitality at work. We used the six-item scale employed in the first study ($\alpha = .90$). Respondents were asked to state (from 1 = “not at all,” to 5 = “to a very large extent”) their current feelings of vitality within this organization.

Job performance. We used the four-item measure in Welbourne, Johnson, and Erez (1998) to assess job performance. Respondents were asked to indicate on a five-point scale (from 1=“strongly disagree” to 5=“strongly agree”) the extent to which they performed their job effectively and efficiently within the organization they were assigned to. Sample items were: “The quantity of work output I produce at work is high,” and “I perform my work with a high level of efficiency” ($\alpha = .94$).

Organizational citizenship behaviors (OCB-O). We used two items from Williams and Anderson’s (1991) measure to assess the extent to which the participants exhibited organizational citizenship behavior toward the organization (OCB-O) they were assigned to. Responses were on a five-point scale (from 1 = “not at all” to 5 = “to a very large extent”). Items were: “Attendance at work is above the norm” and “Gives advance notice when unable to come to work” ($\alpha = .77$).

Manipulation check results. The findings indicated that the co-workers' level of regard manipulation was successful. In the low-level condition, participants perceived that the focal individual experienced a lower level of regardful relationship with the co-workers in the focal organization ($M=1.61$, $SD=0.95$), as compared to the perceptions of participants in the high level condition (i.e., high level of regard) ($M = 4.62$, $SD = 0.56$), $t(91) = -18.3$, $p < .001$.

Appendix D3. Study 3, Measures and Manipulation Check

Measures

Manipulation check. To test the manipulation, following the scenario, we used the same set of items employed in Study 1. The participants were asked to assess the level of regard they experienced in their interactions with co-workers in the given organization ($\alpha = .99$).

Vitality. We used the same measurement items employed in Study 1 ($\alpha = .97$).

Appendix D4. Study 4, Task Instructions, manipulation check, and measures.

Task Instructions

The management team of El Gusto has decided that three factors are important in deciding whether to open a restaurant at each site. All of the factors listed below are equally important.

1. Traffic density on the nearby roads
2. Parking facilities
3. Unemployment rate in the area

The management has studied these factors and determined the recommended cutoff limit for each factor:

1. Traffic density on the nearby roads- 25
2. Parking facilities- 21
3. Unemployment rate in the area- 23

Before we begin we will present a few examples in which the cutoff limit for each factor will appear. In the actual task the cutoff limit for the factors will not be presented, try to memorize it.

Reminder- The management has studied these factors and determined the recommended cutoff limit for each factor:

1. Traffic density on the nearby roads- 25
2. Parking facilities- 21
3. Unemployment rate in the area- 23

Site A got the following rating:

1. Traffic density on the nearby roads- 23
2. Parking facilities- 20
3. Unemployment rate in the area- 22

This site did not meet the recommended cutoff limit in all factors, and therefore you should advise not to open a restaurant at Site A.

Site B got the following rating:

1. Traffic density on the nearby roads- 27
2. Parking facilities- 25
3. Unemployment rate in the area- 24

This site has met the recommended cutoff limit in all factors, and therefore you should advise to open a restaurant at Site B.

Site C got the following rating:

1. Traffic density on the nearby roads- 28
2. Parking facilities- 19
3. Unemployment rate in the area- 24

This site met the recommended cutoff limit on two factors (traffic density on the nearby roads and unemployment) and went over the limit by 3 and 1 points accordingly.

However, this site did not meet the recommended cutoff limit on a second factor (parking facilities), and went under the limit by 2 points.

Because in total the site exceeds all limits by two points ($+3-2+1=+2$), You need to advise to open a restaurant at Site C.

Site D got the following rating:

1. Traffic density on the nearby roads- 20
2. Parking facilities- 24
3. Unemployment rate in the area- 24

This site did not meet the recommended cutoff limit on one factor (traffic density on the nearby roads) and went under the limit by 5 points.

However, this site meets the recommended cutoff limit on a other two factors (parking facilities and unemployment), and went over the limit by 3 and 1 points accordingly.

Because in total the site is under the limit by points ($-5+3+1=-1$), You need to advise not open a restaurant at Site D.

Measures

Manipulation check. To further validate our manipulation, at the end of the study, as in Study 1, we used the scale items from Carmeli (2009) ($\alpha = .97$).

Job performance. Job performance was assessed as task performance. The task involved deciding whether to open a restaurant at a given site based on a recommended cutoff limit for two factors. The participants were instructed to advise their organization on opening a restaurant at a site if it exceeded the cutoff limit on both factors, or if the total rating of the site exceeded the total cutoff limit for both factors. The participants were instructed to advise not to open a restaurant at a site if it did not exceed the cutoff limit on both factors, or if the total rating of the site did not exceed the total cutoff limit for both factors. Performance was measured as the average of correct decisions for the 10 sites presented.

Furthermore, job performance was measured using two items from Black and Porter's (1991) scale. Respondents were asked to indicate how they assessed their performance relative to other participants on a percentage basis along five dimensions: quality (as opposed to quantity) of performance, and efficiency of performance. Responses were on a five-point scale (from 1 = "exceptionally not good," to 5 = "exceptionally good") on their level of performance in the task ($\alpha = .82$).

OCB-O. Participants' level of OCB-O was assessed by asking them about their willingness (from 1=not at all to 5=to a very large extent) to advise on a few more sites voluntarily and to receive a link by e-mail later for the fictitious company, because this firm has a shortage of staff members ($\alpha = .73$).

OCB-I. Participants' level of OCB-I was assessed by adapting two items from Williams and Anderson's (1991) scale. Participants were asked to report their willingness to help other employees in the organization. The scale items are: "I would help other consultants who are having a hard time completing the task" and "I would take the time to listen to other consultants' problems and worries" ($\alpha = .88$).

Study 1, Table 1										
Means, Standard Deviations, and Correlations										
Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1. Gender (0=Male, 1=Female)	--	--	--							
2. Age	26.61	3.74	.11	--						
3. Tenure	1.75	1.88	.06	.43**	--					
4. Education	4.28	1.29	.09	-.08	-.03	--				
5. Positive regard	4.01	.59	.02	.09	.09	.01	(.91)			
6. Vitality	3.95	.59	-.05	.19*	.21*	-.09	.66**	(.86)		
7. Job Performance	3.52	.88	-.19*	-.00	-.06	-.09	.23**	.32**	(.92)	
8. Organizational citizenship behaviors (OCB-O)	3.59	.90	-.07	-.00	.06	-.08	.17*	.26**	.55**	(.78)

N = 132; Reliability coefficients for the scales are in the parentheses along the diagonal.

* $p < .05$; ** $p < 0.01$

Study 1, Table 2
Positive Regard, Vitality, and Job Performance

Variables	Vitality			Job Performance		
	b	s.d.	95% CI	b	s.d.	95% CI
Age	.02	.01	-.007, .04	-.03	.02	-.06, .04
Gender	-.18	.12	-.37, .10	-.29	.23	-.67, .24
Organizational Tenure	.05	.02	-.02, .08	-.02	.05	-.07, .11
Education	-.04	.03	-.09, .04	.01	.06	-.15, .10
Positive Regard	.68**	.07	.50, .75	-.02	.17	-.35, .33
Vitality				.42*	.18	.02, .74

Direct and indirect effects of positive regard (PR) on Job Performance (JP)

	Effect / p	s.d.	CI
Total effect	.27 / .041	.13	-.03, .49
Direct effect of PR on JP	-.02 / .486	.17	-.35, .33
Indirect effect through vitality	.30 / .021	.11	.01, .48

N=132; * $p < .05$; ** $p < .01$

Study 1, Table 3
Positive Regard, Vitality, and OCB-O

Variables	Vitality			OCB-O		
	b	s.d.	95% CI	b	s.d.	95% CI
Age	.02	.01	-.007, .04	-.008	.02	-.05, .04
Gender	-.18	.12	-.37, .10	-.6*	.22	-.93, -.04
Organizational Tenure	.05	.02	-.02, .08	-.07	.04	-.14, .03
Education	-.04	.03	-.09, .04	.07	.06	-.14, .10
Positive Regard	.68**	.07	.5, .75	-.008	.17	-.31, .33
Vitality				.5*	.18	.18, .87

Direct and indirect effects of positive regard (PR) on OCB-O

	Effect/p	s.d.	CI
Total effect	.28/ .071	.17	-.08, .58
Direct effect of PR on OCB-O	-.008/ .532	.17	-.31, .33
Indirect effect through vitality	.34/ .002	.12	.11, .56

N=132; * $p < .05$; ** $p < .01$

Study 2, Table 4**Means and Standard Deviations (s.d.) for Vitality, Job Performance and OCB-O as a Function of Experimental Condition**

Condition	High Level of Positive Regard		Low Level of Positive Regard	
	Mean	s.d.	Mean	s.d.
Vitality	4.36	.53	2.19	1.04
Job Performance	4.57	.54	3.92	.84
Organizational citizenship behaviors (OCB-O)	4.59	.63	4.06	.83

N = 93; All means in the same row differ at the $p < .05$ level or higher.

Study 2, Table 5
Positive Regard, Vitality, and Job Performance

Variables	Vitality			Job Performance		
	b	s.e.	95% CI	b	s.e.	95% CI
Positive Regard	2.16**	.16	1.83, 2.5	.19	.12	-.27, .42
Vitality				.20*	.08	.03, .38
R ²		.64			.14	
df		1, 91			2, 90	
F		164.20**			13.33**	

Direct and indirect effects of positive regard (PR) on Job Performance (JP)

	Effect/p	s.d.	CI
Total effect	.64/ .000	.14	.35, .93
Direct effect of PR on JP	.19/ .422	.24	-.27, .66
Indirect effect through vitality	.45/ .019	.19	.01, .89

N = 93; * $p < .05$; ** $p < .01$; Number of bootstrap samples for bias corrected interval=10,000.

Study 2, Table 6
Positive Regard, Vitality, and OCB-O

Variables	Vitality			OCB-O		
	b	s.e.	95% CI	b	s.e.	95% CI
Positive Regard	2.16**	.16	1.83, 2.5	-.12	.25	-.62, .39
Vitality				.30*	.09	.11, .49
R ²		.64			.20	
df		1, 91			2, 90	
F		164.20**			11.44**	

Direct and indirect effects of positive regard (PR) on OCB-O

	Effect/p	s.d.	CI
Total effect	.54/ .001	.16	.22, .85
Direct effect of PR on OCB-O	-.12/ .648	.25	-.62, .39
Indirect effect through vitality	.65/ .0019	.21	.21, 1.17

N = 93; * $p < .05$; ** $p < .01$; Number of bootstrap samples for bias corrected interval=10,000.

Study 3, Table 7

Means and Standard Deviations (s.d.) for Vitality as a Function of Experimental Condition				
Condition	High Level of Positive Regard		Low Level of Positive Regard	
	Mean	s.d.	Mean	s.d.
Vitality	4.55	.50	1.68	.41

N = 87; All means in the same row differ at the $p < .001$ level or higher.

Study 4, Table 8
Correlation Matrix of Dependent Variables

Variables	Mean	s.d.	1	2	3	4
1. Objective Task Performance	.81	.21	--			
2. Self-Report Performance	4.18	.66	.36**	(.82)		
3. OCB-I	4.16	.89	.01	.44**	(.88)	
4. OCB-O	3.64	1.17	.11	.42**	.61**	(.73)

N = 96; Reliability coefficients for the scales are in parentheses along the diagonal.

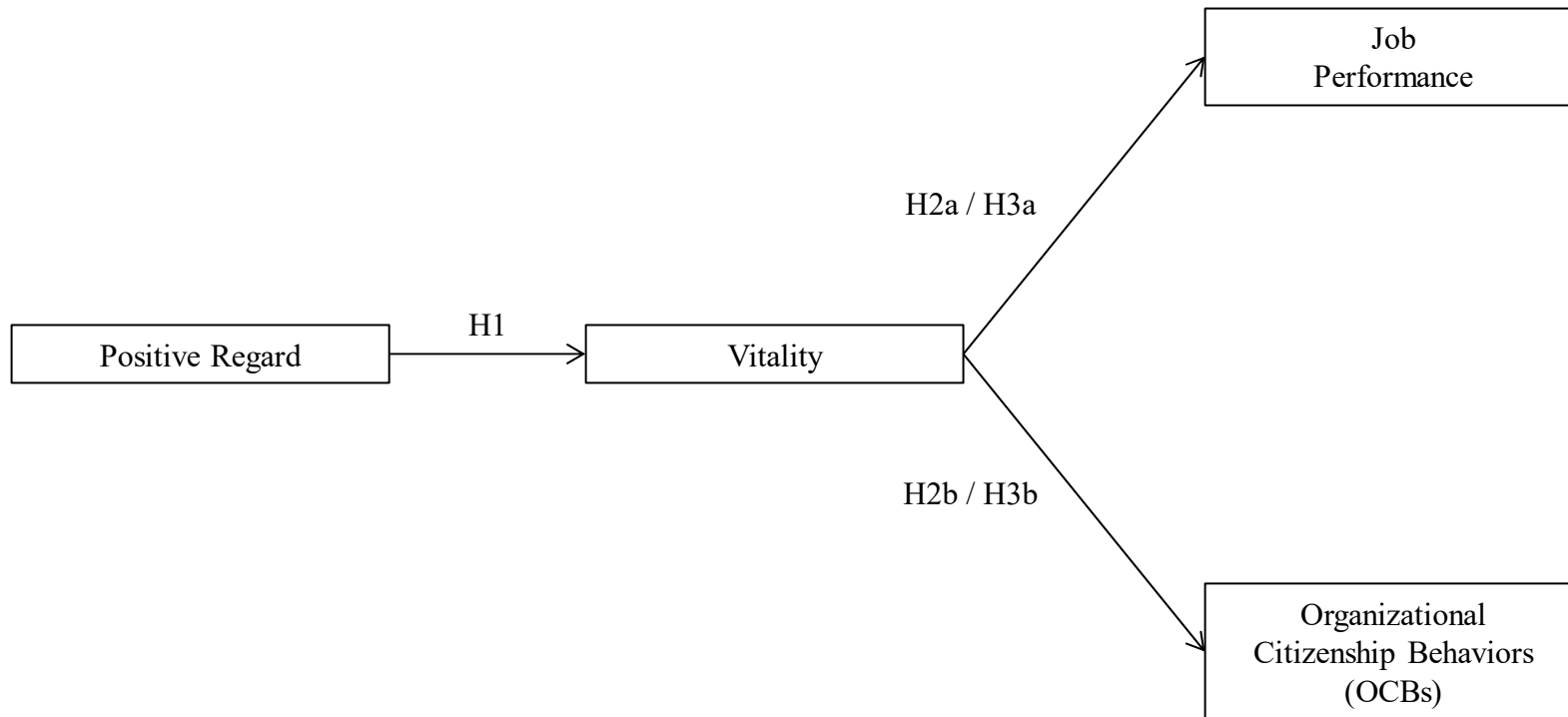
* $p < .05$; ** $p < 0.01$

Study 4, Table 9
Means and Standard Deviations (s.d.) for Performance and OCB as a Function of
Experimental Condition

Condition	High Level of Vitality		Low Level of Vitality		p	η^2
	Mean	s.d.	Mean	s.d.		
Task Performance	.88	.03	.75	.30	.03	.12
Self-Report Performance	4.34	.10	4.00	.92	.02	.08
OCB-I	4.39	.13	3.92	.12	.02	.08
OCB-O	3.96	.17	3.31	.16	.02	.09

N = 96; All means in the same row differ at the $p < .05$ level or higher.

Figure 1.
The Hypothesized Research Model



Note. We assessed OCB-O in Studies 1 and 2 and expanded this examination in Study 4 to also evaluate the influence on OCB-I.