Appreciation at Work and its Consequences

The importance of appreciation as a resource in the context of work

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Summary

In today's difficult global economy, work related stress is high. Stress — along with other health impairing factors — can affect work productivity, satisfaction, safety, absenteeism, turnover, and even workplace violence, which is why organizations are increasingly turning to occupational health psychology to develop, maintain, and promote the health of employees. In occupational health psychology, one of the core assumptions is that conditions at work affect employee well-being. Appreciation is one of the positive aspects of work, which can promote optimal human functioning and well-being. The current Swiss National Foundation project is embedded in this context. The four main goals of the project whereas follow: 1) Longitudinally test, if appreciation predicts well-being; 2) investigate if some sources of appreciation are more important than others; 3) to test if appreciation interacts with stressors, such that the effects of stressors are attenuated if appreciation is high; and 4) investigate the short-term effects of appreciation on well-being through diary methods and analyze the interaction with positive and negative daily experiences. The first and third paper written in the course of this project present longitudinal data and confirm the positive effects of appreciation over time (first objective). Furthermore, we tried to disentangle within-person and between-person effects, confirming previous findings that an effect happening at one level, cannot automatically be assumed to happen at another. The second objective of this dissertational project was to investigate if different sources of appreciation are more important than others. Our results clearly showed, that supervisors, followed by work colleagues, where the most important sources of appreciation (papers I-III). The third aim of the project was to test if appreciation interacts with stressors, such that the effects of stressors are attenuated if appreciation is high. In our first and second paper we find partial confirmation for this hypothesis. Appreciation did buffer the negative effect of illegitimate tasks on affective well-being, but only on a within-person level (paper I). On a daily level, appreciation did also work as a buffer for negative daily experiences (paper II). The fourth aim of the study was to investigate appreciation and the short-term

consequences on well-being on an inter-individual level. We also wanted to find out, if there was an interplay with positive and negative daily experiences at work. In our second article we present data from our diary study, where we captured the short-term fluctuations in appreciation, indicators of well-being as well as how many positive and negative experiences participants made daily. Again, appreciation from supervisors had the strongest effect on well-being. Also, appreciation from colleagues had a significant effect on well-being after work, but only when participants were confronted with negative experiences that day. Furthermore, we found that appreciation from supervisors buffered the negative impact of daily negative events. Appreciation from colleagues did not.

1   Theoretical Overview

1.1   Introduction

Over the last 50 years or so, major changes have taken place in the workplace (Sparks, Faragher, & Cooper, 2001). The new challenges set on today's workforce as well as on employers by the new and very fast developing technologies has increased drastically over the last decades (Faragher, Cass, & Cooper, 2016; Schabracq & Cooper, 2000). Fast developing technologies have increased competition between businesses exponentially over the last decades. Organizations who want to survive the market's challenges need to keep pace with their competitors and with technological progress. Employees, in turn, are constantly confronted with a fast-developing work environment (Junghanns & Morschhäuser, 2013) that is susceptible to create stress-inducing pressures and requires more and more coping strategies to deal with the pressure.

1.2   Occupational health psychology

In the 1990s, occupational health psychology emerged as a novel psychological specialty (Schaufeli, 2004), which concerns itself with the health, well-being and safety of workers (Houdmont & Leka, 2010; Schonfeld & Chang, 2017). In today's difficult global economy, work related stress is high. Stress — along with other health impairing factors — can affect work productivity, satisfaction, safety, absenteeism, turnover, and even workplace violence, which is why organizations are increasingly turning to occupational health psychology to develop, maintain, and promote the health of employees.

Research in occupational health psychology has experienced a broadening of the focus from mainly negative aspects, to a broader view focusing on the positive aspects as well, investigating stressors and resources, their appraisal, and their (potential) consequences as well

as moderators (Kahn & Byosiere, 1992; Semmer, McGrath, & Beehr, 2005; Sonnentag & Frese, 2003; Zapf & Semmer, 2004). The current research project is embedded in this context.

1.2.1   Well-being, stress and resources at work

Well-being. Epidemiologists have long been aware of the influence social and environmental factors can have on how people feel. Since workers spend about one-third of their waking hours at work, the workplace has a potentially big influence on health and well-being (Danna & Griffin, 1999; Faragher et al., 2005; Leitner & Resch, 2005). In occupational health psychology, one of the core assumptions is that work conditions affect employee well-being (Bakker & Demerouti, 2007; Brauchli, Schaufeli, Jenny, Füllemann, & Bauer, 2013; De Jonge, Bosma, Peter, & Siegrist, 2000; Faragher et al., 2005). Well-being is a broad construct which has found many definitions in the literature over the last decades. Well-being can be described as a multi-faced construct comprising physical, psychological and social health (Pressman, Kraft, & Bowlin, 2013). Health is a prerequisite for the maintenance and the development of work performance and motivation (Ohm & Strohm, 2001). The World Health Organization defines health as a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 1998). Although often in the focus of research, a clear conceptualization of well-being is difficult to make (Danna & Griffin, 1999). In the literature, many definitions can be found: Well-being can be defined as optimal psychological functioning and experience (Ryan & Deci, 2001). „Subjective well-being refers to how people evaluate their lives" (Bakker & Oerlemans, 2011, p. 183). Applied to the work context, an employee has a high work-related well-being if he or she is a) satisfied with the work they do and b) experience frequent positive emotions and infrequent negative emotions (Bakker & Oerlemand, 2011; Diener, Sandvik, & Pavot, 1991). This definition takes into consideration a cognitive evaluation of one's job (satisfaction with the job) as well as an affective experience (positive vs. negative experiences at work; Bakker & Oerlemans, 2011; Diener, Suh, Lucas, & Smith, 1999; Weiss & Cropanzano, 1996). Furthermore, on the basis of

the circumplex model of emotion, psychological well-being measures the hedonic dimension of individual feelings (Russel, 1980; Wright & Cropanzano, 2000). In other words, employees may experience either high activation levels or low activation levels at work (e.g. circumplex model, Russel, 1980; Warr, 1990). Warr (1987, 1990) has provided extensive reviews and analyses of the notion of well-being. Warr uses health as a framework suggesting that *affective well-being* is an element of mental health (1987, 1990). Diener (1984) used the term subjective well-being to characterize a person's overall experience in life where high levels are characterized by pleasant emotional experiences. "Moods and emotions, which together are labeled affect, represent people's on-line evaluations of the events that occur in their lives" (Diener et al., 1999; p.277). Following Linley and colleagues, subjective well-being comprises an affective component of the balance between positive and negative affect and at the same time also comprises a cognitive component of judgments about one's life satisfaction (Linely, Maltby, Wood, Osborne, & Hurling, 2009).

All these different definitions show how broad this field of research has become. Since the development of positive psychology (Seligman & Csikszentmihalyi, 2000), the nature and structure of well-being has become a central focus in the scientific study of optimal human functioning (Linley et al., 2009). In a broader sense, the research in this field can be distinguished in two main categories: 1) Where well-being is understood as having an affective component as well as a cognitive component (see definitions above); or 2) Well-being as "engagement with existential challenges of life" (Keyes, Shmotkin, & Ryff, 2002, p. 1007), as conceptualized by Ryff's (1989) six factors of positive relations with others: Self-acceptance, purpose in life, autonomy, environmental mastery and personal growth. In this research project, we focus on the affective component of subjective well-being in the work context, which often is conceived in terms of the emotional circumplex (Russel, 1980, 2003; Yik, Russell, & Steiger, 2011). Based on this model, each emotion can be seen as a combination of arousal and pleasure. While experiencing a pleasant emotion, the degree of arousal can vary considerably (Warr,

2007). Feeling calm and content implies a lower level of arousal compared to feeling excited or enthusiastic. The same is true for the experience of negative emotions where the emotions can range from feeling bored or depressed (low arousal) to feeling anxious or tense (high arousal). Specifically, Warr (2007) distinguishes between two axes, one ranging from depression to enthusiasm, the other from anxiety to contentment. On this basis, Warr proposes four quadrants, which represent different combinations of arousal and pleasure: Enthusiasm represents high arousal pleasant affect (HAPA), depression represents low arousal unpleasant affect (LAUA), anxiety represents high arousal unpleasant affect (HAUA), and contentment represents low arousal pleasant affect (LAPA). Every affective experience can be "assigned" to one of the four quadrants.

Stress. As mentioned before, in occupational health psychology, one of the core assumptions is that job characteristics affect employee well-being (Bakker & Demerouti, 2007; Brauchli et al., 2013; De Jonge et al., 2000; De Lange, Taris, Kompier, Houtman, & Bongers, 2004; Faragher et al., 2005; Hackman & Oldham, 1975, 1976). Specifically, models of occupational stress propose that stressors at work can have a negative impact on well-being, health and performance (Beehr, 1995; Ganster & Schaubroeck, 1991; Jex & Beehr, 1991; Sonnentag & Frese, 2003). In fact, research examining the relationship between work stress and well-being has thrived over the past couple of decades (Ganster & Rosen, 2013). Many studies confirm work stress physically and psychologically damages workers and represents a serious economic burden for organizations but also for society as a whole (Bono, Glomb, Sehn, Kim, & Koch, 2013; Danna & Griffin, 1999; Ganster & Schaubroeck, 1991; Manning, Jackson, & Fusilier, 1996; Pfeffer, 2010; Schnall, Doboson, & Rosskam, 2009; Wright & Cropanzano, 2000; Skakon, Nielsen, Borg, & Guzman, 2010; Sonnentag & Frese, 2003). In 2002 the European Commission calculated the cost of work-related stress to amount to 20 billion Euro per year. In the survey of 2013, the Commission found these costs to go as far up as 617 billion euro annually. These costs derived from losses due to absenteeism and presenteeism (272 billion),

loss of productivity (242 billion), health care costs of 63 billion and social welfare costs resulting from disability benefit payments (39 billion; European Agency for Safety and Health at Work – EU-OSHA, 2013). Because of the practical relevance of workplace stress, there is a very big and still ongoing research activity within this field. The research addresses sources of stress, trying to define ways to eliminate them from work environments, and ways to reduce their negative impact on individuals, organizations and society (e.g. Bono, et al., 2013; Ganster & Schaubroeck, 1991; Rau, Georgiades, Fredrikson, Lemne, & de Faire, 2001; Semmer et al., 2005; Sonnentag & Frese, 2003; Van der Doef & Maes, 1998).

Stress can be thought of as a) a feature of the external environment, b) an individual's response (psychological, physiological and behavioral) to external demands or threats, or c) an interaction of the two (Ganster & Rosen, 2013). Stressors are those environmental events which trigger these processes, whereas the individual responses are often referred to as strains (Ganster & Rosen, 2013; Griffin & Clarke, 2011). The conceptualization of stress can broadly be categorized in four stress concepts: 1) the stimulus concept; 2) the response concept; 3) the transactional concept and 4) the discrepancy concept (Sonnentag & Frese, 2003). The stimulus concepts put their focus on situational conditions or events, where certain stimuli are perceived as more stressful then others. The problem with this concept is the fact that individuals react very differently to different situations. A certain situation can be perceived as very stressful by one individual, but not forcedly so by another. The reaction concept focuses on the physiological reactions to stress, where a certain situation is stressful only if an individual shows certain patterns of physiological reactions (Selye, 1956). The problem with this concept is the fact that it does not take into account that different situations can lead to the same physiological reaction and that individual's coping efforts may have an effect on reactions, thus altering the stress response. The third class of concepts takes both, the situation as well as the person, into account when defining stress. The transactional stress model of Lazarus and Folkman (1984) is probably one of the early most influential stress models. This model assumes

that stress results from a transaction between the individual and the environment. In this model, also the individual's perceptions, expectations, interpretations and coping responses are taken into consideration. Although the emphasis of the model is set on appraisal and coping, also resources find a central role in the model. The resources people have at their disposal to answer threats and challenges determine the degree to which individuals appraise something as threatening and the coping choices they make (Hobfoll, 2002). The last conceptualization of stress, the discrepancy concept, sees stress as an incongruence between what individuals desire and the environment they are facing (Edwards, 1992). The difficulty with this concept is the operationalization of the discrepancy (Sonnentag & Frese, 2003).

Stressors. "Job stressors refer to the degree to which the work environment contains stimuli that require sustained cognitive, emotional, or physical effort" (De Jonge & Dormann, 2006; p. 1359). Job stressors increase the risk of impaired well-being (Sonnentag & Frese, 2003; Warr, 1999). Stressors at work can be very different in nature, e.g. result from adverse physical work conditions like vibration, noise, heat, cold, chemical or toxic substances and other potentially physically damaging conditions (physical stressors; De Hart, 1990). Stressors can also be directly related to work at hand, so called task-related stressors, which occur while doing a task and include high time pressure as well as work overload, monotonous work and disruptions (Sonnentag & Frese, 2003). Role stressors refer to role ambiguity and possible role conflicts (Jackson & Schuler, 1985). But also stressors like social stressors, time-related stressors, career-related stressors, traumatic events, and stressful change processes can lead to strain for employees (Sonnentag & Frese, 2003). Employees experiencing high levels of job stressors are likely to experience strain, unless they have resources at their disposal to mitigate the impact of stressors on strain (De Jonge & Dormann, 2006). Furthermore, not each and every individual's reaction will be the same to the same stressor (Semmer et al., 2005). This is why the definitions offered by transactional models (e.g., Lazarus & Folkeman, 1986) has found so much

recognition amongst stress researchers, since it defines stress neither by the environmental factors nor by the responses to it, but rather in a relationship between the two.

Resources. As stressors can negatively influence employee's well-being, on the other hand, health and well-being can be positively influenced through positive experiences at work: The so called resources. Resources are positive aspects of working life which in turn promote "optimal human functioning, positive emotions, well-being, and health" (Elfering, Gerhardt, Grebner, & Müller, 2017, p. 20; Seligman, 2008). Resources are important determinants of motivational states like work engagement, which can result in commitment, goal attainment and job satisfaction (Elfering et al., 2017; Locke & Latham, 1990). At the same time, resources can work as protecting factor against job strains (Grebner, Elfering, & Semmer, 2010). "Job resources are functional in achieving work goals and may stimulate personal growth, learning, and development" (Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010, p. 118).

In the field of organizational stress research, for a long time the focus has been exclusively on the negative side of this experience, in line with the traditional focus on psychological problems (Fredrickson, 2004). Only later, with the emerging field of positive psychology at the end of the 90ies (Seligman & Csikszentmihalyi, 2000) the focus has shifted from the negative view, to also incorporate the positive side. So, over the last decades, psychology has increasingly focused on resources in the examination of well-being (Hobfoll, 2002). Positive indicators of well-being at work like job satisfaction (Faragher et al., 2005; Jex & Bliese, 1999; Judge, Thorensen, Bono, & Patton, 2001), work engagement (Bakker & Leiter, 2010; Bakker, Schaufeli, Leiter, & Taris, 2008), and happiness at work (e.g., Diener & Biswas-Diener, 2008; Ryan & Deci, 2001; Warr, 2009) have found more and more attention.

About three decades ago, conservation of resources (COR) theory was first presented as an alternative approach to stress and adaptation (Hobfoll, 1989). COR theory posits that individuals seek to obtain, retain, foster and protect resources (Hobfoll, 1989, 1998, 2002). Resources are defined as "those entities that either are centrally valued in their own right, or act

as means to obtain centrally valued ends" (Hobfoll, 2002, p.307). Stress occurs when those resources are threatened, are lost or when individuals fail to gain resources after substantive resource investment. Resource loss is thus central to the stress experience (Hobfoll, 2002). The two main assumptions of COR theory are that for one, people have to invest resources to be able to deal with stressful conditions and preserve themselves from negative outcomes. Consequently, individuals with greater resources, will be less vulnerable to stress, whereas those with fewer resources will be more vulnerable to stress. The second assumption is that people must invest resources in order to protect themselves against future resource loss and strive to recover resources and gain new resources (Hobfoll, 2002; Salanova et al., 2010). Another resource based theory was proposed almost a decade later: Fredrickson's broaden-and-build (B&B) theory (1998, 2001). This theory seeks to explain how positive emotions or pleasant affective states promote well-being. Specifically, this theory states that positive states have the ability not only to *broaden* people's momentary thought-action repertoires, but also to *build* their enduring resources (Fredrickson, 2001). This theory goes beyond the idea that positive emotions *signal* optimal functioning (Fredrickson, 2001), but rather that positive emotions also *produce* optimal functioning over the long term (Fredrickson, 2004). The "broadening" part of the theory states that positive emotions broaden people's momentary thought-action repertoires, expanding the number of possible thoughts and actions that come to mind. In contrast, negative emotions narrow thought-action repertoires promoting a quick and decisive action as escaping or attacking, which can be very important in life-threatening situations (Fredrickson, 2004). Positive emotions, like joy for example, are linked with aimless activation and promote the desire to play and push the limits and be creative. Interest can spark the urge to explore and contentment sparks the desire to savor and integrate. In each case, positive emotions broaden habitual modes of thinking or acting (Fredrickson, 2004). Furthermore, "broadened mindsets carry indirect and long-term adaptive benefits because broadening builds enduring personal resources" (Fredrickson, 2004, p. 1369). Those personal

resources can function as reserves to be drawn on later to face future threats (Fredrickson, 2001). The "broadening" part can be illustrated with the example of play. Research on child development has found results suggesting that interactions with siblings and other peers in early years (e.g. while playing) shape the development of social skills as adults (Pettit, Dodge, & Brown, 1988). This correspondence suggests that juvenile play supports the development of social skills and resources which can also be used later in life. Child play can also build enduring intellectual resources by increasing levels of creativity (Fredrickson, 2001; Sherrod & Singer, 1989). "In short, the broaden-and-build theory describes the form of positive emotions in terms of broadened thought–action repertoires and describes their function in terms of building enduring personal resource" (Fredrickson, 2001, p. 221). In line with this thinking, some researchers have postulated that happiness may generate more job-related resources: Happy employees may act in a more pleasant way, compared to unhappy workers, so that colleagues are more inclined to provide instrumental, social and emotional support (Bakker & Oerlemans 2011). Happiness also leads to more success, not only at work but also in other life domains (Lyubomirsky, King, & Diener, 2005). The authors suggest that positive affect may be the cause of many desirable characteristics correlated with happiness. The authors propose that happiness does not merely lead to success, but rather positive affect engenders success. Positive affect leads people to think, feel and act in ways which promote resource building and involvement with goals (Elliot, & Thrash, 2002; Lyubomirsky et al., 2005).

Furthermore, several researchers have pointed out that resources may work as a buffer on the relation between job demands and job strain (Bakker & Demerouti, 2007; De Jonge & Dormann, 2006; Dormann & Zapf, 1999; Jex & Bliese, 1999). More specifically, high job demands can have a deleterious impact on health and well-being, unless workers have sufficient job resources to deal with their demanding jobs. In other words, the resource moderates the relationship between stressors and strain. The resource works as a buffer and prevents stressors from developing their impact on strain (Dormann & Zapf, 1999). One reason why this

moderating effect has received attention in the literature is maybe the practical implications of it. Since often the stressors cannot be reduced, the negative effect of high stressors can be compensated for by increasing the resources (De Jonge & Dormann, 2006; Dormann & Zapf, 1999).

A number of theoretical frameworks try to explain the role of job resources in the stressor-strain relation. Two kind of frameworks can be differentiated: Additive effect models or interactive effects models of job stressors and job resources (De Jonge & Dormann, 2006). The first type of models assume an independent effect of stressors and resources on strain, whereas the interactive effect models assume a moderating role of resources on the relation between stressors and strain (De Jonge & Dormann, 2006). Examples for the interactive models are the demand-control model (Karasek, 1979; Karasek & Theorell, 1990), the effort-reward imbalance model (Siegrist, 1996) and the job demand-resources model (Bakker & Demerouti, 2007). Karasek's demand-control model (1979) advances the idea that health impairments may be influenced by two dimensions at work: Job demands and job control or resources. A combination of high work demands and low level of permitted discretion in the control of one's own work carries the highest risk for ill health. Put the other way around, the model assumes that high decision latitude attenuates the negative effects of high demands. Many studies have found support over time for this model (for an overview see de Lange, Taris, Houtman, & Kompier, 2003). The effort-reward imbalance model (Siegrist, 1996) claims that a lack of reciprocity between costs and gains in the work context, lead to an emotional state of distress. In other words, if the costs or efforts invested in the work are high, and at the same time the rewards (e.g. money, esteem or status control) are low, this situation will lead to stress. This imbalance may be particularly detrimental for well-being, if this situation persists over a longer period of time (Siegrist, 1996). This theory has found a great number of support in cross-sectional as well as in longitudinal studies (for an overview see Van Vegchel, De Jonge, Bosma & Schaufeli, 2005). The job demand-resources model (Bakker & Demerouti, 2007) postulates

that the characteristics of the work environment can be classified in two general categories: Job demands end job resources. Job resources may attenuate the negative impact of job demands (i.e. stressors) on strain and well-being (e.g. buffering effect; Bakker & Demerouti, 2007). This model has been tested in numerous longitudinal studies (for an overview see Schaufeli & Taris, 2014).

To conclude, organizations can play a significant role in improving their workers' health. To do so effectively, it is important for them to know which factors underlie health and well-being and the processes through which work experiences might affect them (Ganster & Rosen, 2013).

1.3   Appreciation as an important resource in the context of work

Employees are the most important asset of an organization (Stambor, 2006) and consequently, organizations to be competitively viable, need to attract, keep and take care of the best possible employees (Mitchell, Holtom, & Lee, 2001). As Mitchell and colleagues argue, the competition to retain key employees is intense. An argument could be made that one way to attract and keep the best employees is by offering employees' a workplace characterized by high resources and possibly low stressors.

The effort-reward model by Siegrist (1996, 2002; Siegrist & Rödel, 2006) postulates that an imbalance between efforts invested and rewards received increases the risk of impaired well-being and ill health. In this model, a balance between efforts given and rewards received is in the center of the theory. If the efforts exceed the rewards received, an unbalance will develop, which in turn is connected with impaired well-being and health (Tsutsumi & Kawakamu, 2004). Together with status and salary, esteem is one of the three important reward factors in Siegrist's model. In a study by van Vegchel, de Jonge, Bakker and Schaufeli (2002), appreciation was found to be the most important of the reward factors for employee well-being. Appreciation is thus one of the positive aspects of work, which can promote optimal human

functioning and well-being (Elfering et al., 2017; Nelson, 2006). It is therefore not surprising that appreciation found more and more attention over the past years, not least of all in the context of work. Thus, a cross-sectional study found that appreciation was ranked the third of ten motivational factors for employees (Linder, 1998). Another study found that appreciation was positively related to work engagement, and its effect was the strongest out of six resources tested (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). Another cross-sectional study by Stocker, Jacobshagen, Semmer, and Annen (2010) showed an association of appreciation with well-being indicators such as job satisfaction and reduced negative emotions, over and above other important resources (social support and interactional justice). In a longitudinal study, Semmer and colleagues found that the more time points in which participants reported experiencing appreciation, the higher job satisfaction was at the last measurement point (Semmer, Tschan, Elfering, Kälin, & Grebner, 2005). A recent cross-sectional study found an interaction between illegitimate tasks and appreciation in predicting turnover intentions on an inter-individual level (Apostel, Syrek, & Antoni, 2017). Another recent study found that appreciation mediated the relationship between conflicts with supervisors and well-being (Elfering, et al., 2017). Semmer, Jacobshagen, and Meier (2006) report longitudinal data with four waves of measurement over five years. Controlling for initial job satisfaction, the number of times participants reported high appreciation at work predicted job satisfaction at the last wave of measurement, indicating cumulative effects. An event sampling study found that appreciative events throughout the workday predicted well-being in terms of serenity after work intra-individually (Stocker, Jacobshagen, Krings, Pfister, & Semmer, 2014).

As yet there is not much research focusing especially on appreciation as a resource in its own right. The few studies which have been conducted in this field show however, that it could be a promising resource in the context of work.

1.3.1 Definition

Dictionary definitions of appreciation define it as the act of recognizing or understanding that something is valuable; or as recognition or enjoyment of the good qualities of someone or something. Appreciation in the context of work is an appreciation of the person itself and of the work he or she does. Appreciation is not just an after-the-fact acknowledgment of employees' performance or special achievements (Nelson, 2006). More than this, appreciation is a recognition of the person's value and can be expressed in many different ways. The most common way of expressing appreciation is trough praise. A study by Jacobshagen and Semmer (2009) found that praise could make up to 74.4% of cases where appreciation is expressed. But appreciation is more than praise. It can be expressed through showing interest in a person's work, in the person itself, to assign interesting tasks to employees or thanking someone for the help given. It can also be through recognizing the quality of someone's work, giving compliments, but it can also be given in more subtle or indirect ways: Also improved working conditions, flexible working hours, giving an employee more autonomy, giving a present, a chance to participate in an advanced training, showing respect or interest in someone's ideas can all be forms of appreciation. Also, by acknowledging a person's personal needs, appreciation can be shown: For example, by considering the family situation or possible health problems of a person. In addition, showing trust in the knowledge and capabilities of a certain person can also be perceived as appreciation from the latter. But appreciation must not always be the recognition of something positive, it can also be the diminishing or elimination of something perceived as negative (Kossbiel, 1995).

1.3.2 Appreciation and the "Stress as Offence to Self" concept

The idea that appreciation is a potentially relevant resource in the context of work originated from the "Stress as Offence to Self" (SOS) model (Semmer et al., 2007). This concept focuses on self-esteem as a central element for understanding stress processes by postulating that the threat to one's self or self-esteem is a key element for many stress processes. Research on self-

worth and self-protection behavior indicates how much the pursuit of positive self-assessment and positive judgment by others determines the actions and motivations of people (Leary, 2007; Sedikides & Strube, 1997). Self-esteem in the process of stress can be looked at from different perspectives. On one side, existing research addresses self-esteem in its function as a resource in the stress process, and on the other side, the effects of stress on self-esteem as a dependent variable. However, the (potential) impairment of self-esteem has hardly been in focus as the actual stress-inducing moment itself. The SOS model points to the considerable significance of this "ego-threat" for the overall stress event (Semmer & Jacobshagen, 2003).

The key trigger for the self-esteem threat lies in the evaluation of the individual. This may be a self-assessment (personal self-value) or an assessment by others (social-self-value; Sedikides, 1993). On the one hand, if one does not meet his or her own requirements or experiences a failure, stress results from a feeling of insufficiency (stress through insufficiency = SIN). If, on the other hand, the assessment by others turns out to be negative, for example if one's own person or achievement is "not respected" by the other person, stress arises as a result of disrespect (SAD; Semmer et al., 2007).

Although the SOS model sees the threat to self as a central part in the process of stress, the model is not limited to negative experiences or ego threats. In the model, also boosts to self-worth play an important role and are considered as important resources (Semmer et al., 2007). Appreciation plays a key role here, as booster for self-esteem (Semmer & Jacobshagen, 2003). Appreciation and self-esteem are closely related in that appreciation in the form of praise, compliments or signs of sympathy serves to enhance self-esteem (Leary, 1999). In their review article on "Impression Management," Leary and Kowalski (1990) point to the extraordinarily strong motivation to maintain or even increase their own self-esteem. While "personal self-esteem" leads to pride through internal attributed success (Semmer et al., 2007), it is recognition and respect that satisfy the social self, social needs, competence, status and prestige in the "social self" (Semmer & Jacobshagen, 2003).

For Semmer and Jacobshagen (2003) appreciation refers to the positive evaluation by others and is closely connected to self-esteem (Harter, 1993; Leary, 2007). Appreciation implies recognition of one's individuality, achievements and qualities, boosting self-esteem (Semmer, Jacobshagen, Meier, & Elfering, 2007). Appreciation signals acceptance and esteem, and thus responds to the need to belong (e.g., Leary, 1999). As the need to belong and to be accepted by others is an important motive (Leary & Baumeister, 2000), the behavior of others which signal a lack of appreciation and respect are perceived as a threat to one's social esteem (Semmer et al., 2007). In this view, the lack of appreciation can be a cause for stress ("stress as disrespect"), expressed through disregard and disparage by others (Jacobshagen & Semmer, 2009). This can happen in direct social interaction with others, but also through more indirect ways, for example the assignment of tasks, which may be seen as unnecessary or unreasonable, and therefore be perceived as illegitimate (Semmer, et al., 2007).

1.3.3 Who, why and when of appreciation

In the context of work, there are three basic sources of appreciation: supervisors, colleagues and clients (Jacobshagen, Oehler, Stettler, Liechti & Semmer, 2008). Based on previous findings and on our findings in the current research project, supervisors seem to be the most important source of appreciation for employee well-being (Stocker et al., 2014). This is not surprising, since supervisors (as well as colleagues) are the most important source of social support (Beehr, 1995) and influence the social climate at work (Frese & Zapf, 1987). Moreover, appreciation can be used as an important instrument for leadership (Jacobshagen & Semmer, 2009). Also, if we think of the definition of appreciation - an evaluation by others and connected to self-esteem- it is part of supervisors' job description to evaluate employees. It could therefore be argued, that supervisors are thus per definition the most important source of evaluation in the context of work. Also because supervisors control important job-related resources for subordinates (Farmer & Anguinis, 2005), they play an important role in employee well-being. Although appreciation from supervisors is the most important source for well-being, co-

workers are the biggest source for appreciation. In many jobs, measured in time spent together, employees will probably spend more time with other colleagues compared to the time they spend with their supervisor, creating more opportunities for colleagues to appreciate them. But, in the work context, also clients can play an important role as sources of appreciation (Jacobshagen & Semmer, 2009). In their study, Jacobshagen and Semmer (2009) found that clients were the second most common source of appreciation at work.

In the context of work, the most common reason why people give appreciation is performance. Appreciation fosters affective well-being, life satisfaction (Adler & Fagley, 2005) and buffers the negative impact stressors such as work interruptions (Stocker, et al., under review) and illegitimate tasks (Pfister, et al., under review). Appreciation can be used as an instrument of leadership, with the goal of influencing employees' behavior. In the sense of reinforcements and punishments to guide behavior, appreciation can be seen as a positive reinforcement (Rettler & Göll, 2010).

1.3.4   Appreciation as a construct in its own right

Already in early research about resources, the connection between resources and well-being was discovered (Caplan, 1964; Grinker & Spiegel, 1945). Especially social resources seem to be important for the resilient self to better cope with stressful environments (Beckman & Syme, 1979; Kelly, 1966; Hobfoll, 2002; Sarason, 1974). Kelly (1966) and Sarason (1974) both theorized that people's well-being depends on their access to resources. Social support is the most studied social resource to date. Social support has been linked to better mental health, more stress resistance and better physical health outcomes (Antonucci & Akiyama, 1987; Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1997; Cohen & Wills, 1985; House, Landis, & Umberson, 1988; Vaux, 1988). Appreciation, in comparison, has found much less attention. Although recognized as an important resource long ago by William James (1920), later recognized by Rogers (1942) as an important component in the relation between therapist and

client, and also despite the fact that Maslow (1977) ranked esteem as one of the important needs in his motivational hierarchy and findings showing that appreciation enhances motivation and job satisfaction (Herzberg, 1974), and a later study which examined the effects of appreciation on well-being in the context of role involvement (Baruch & Barnett, 1986), appreciation has seldom been in the focus of research as a construct in its own right. It is more often analyzed as a part of larger constructs e.g., leadership (van Quaquebeke and Eckloff, 2010), social support (Kaplan, Cassel, & Gore, 1977), and organizational justice (Bies, 2015).

Although it can be argued that appreciation is a facet of social support, we argue that appreciation social support are two distinct constructs. Although the definitions of social support vary, it has been defined broadly as "the availability of helping relationships and the quality of these relationships" (Leavy, 1983, p. 5), including both tangible components like financial assistance and physical aid as well as intangible components like encouragement and guidance (Heitzmann & Kaplan, 1988). Social support gratifies an individual's basic social needs (e.g., approval, esteem, succor and belonging; Kaplan et al., 1977). Although both satisfy the need to belong, social support is the perceived amount of support from others, whereas appreciation is more linked to a positive evaluation by others and when given, boosts self-esteem which in turn is important for well-being (Semmer & Jacobshagen, 2003).

Being recognized gives a person a feeling of success. Recognition (appreciation) is an incentive in itself to behave in such a way that will bring even more recognition. Kratz (1997) talks about a recognition-loop. In some literature, a distinction between appreciation and recognition is discussed. For example, Rettler and Göll (2010) see appreciation as a general aspect expressed through respect and esteem, whereas recognition is something situation-specific (for example praise by the supervisor for a specific task well done) and can be used as a leadership tool to motivate employees. The authors argue that appreciation in general should always be present (e.g. a fundamental respect for the person itself). We do not make this

distinction, but rather as outlined before, we define appreciation in the context of work as an appreciation of the person itself and of the work he or she does, not just as an after-the-fact acknowledgment of employees' performance or special achievements but rather a recognition of the person's value.

1.3.5 Appreciation as a buffer

As discussed previously, in the literature, resources have often been postulated to interact with stressors (Karasek & Theorell, 1990; Tremblay & Messervey, 2011; Viswesvarana et al., 1999), in the sense that they protect from potentially adverse effects of stressful events (Elfering et al., 2017; Grebner et al., 2010). The job demands-resource (JD-R) model (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) postulates that job resources may buffer the impact of job demands on strain (well-being). In this view, the relationship between job demands (i.e. stressors) and strain is weaker for individuals with a high level of job resources (Bakker et al., 2007; Caplan, Cobb, French, Von Harrison, & Pinneau, 1975). In other words, under demanding work conditions, employees having enough job resources may be more capable of dealing with the demands set on them (Tremblay & Messervey, 2011). Applied to our study, we expect the negative relationship between stress at work or daily negative experiences and well-being after work to be weaker for those participants enjoying high levels of appreciation (Stocker et al., under review).

1.4 The measurement of appreciation

In the current research project, we measured appreciation through the German version of the appreciation scale developed by Jacobshagen and colleagues (Jacobshagen et al., 2008; Table 1).

Table 1. *Appreciation scale (Jacobshagen, et al., 2008).*

Subscales	Items
Appreciation from supervisors	My supervisors praise me when I carry out my tasks well.
	When talking with my supervisors I can voice my opinion.
	My supervisors always listen to my concerns.
	When I perform a task well, other interesting tasks are assigned to me.
	My supervisors compliment my work.
Appreciaiton from colleagues	My colleagues appreciate it that I help out whenever they run into problems.
	My colleagues ask for my advice.
	In a lot of ways colleagues signal to me that they trust me.
	My colleagues and I experience a lot of nice interactions (eat together, talk about private things etc).
	My colleagues show how much they value my opinion by asking for my advice.
Appreciation from clients	If I show extra effort, my clients notice it.
	My clients compliment my work.
	My clients praise my work in front of my supervisors.
	Sometimes I receive little presents from my clients.
	Many of my clients prefer to be served by me.

1.1   Capturing positive and negative events at work

Dispositional as well as situational factors have a strong influence in the subjective perception of well-being (Diener et al., 1999; Updegraff, Gable, & Taylor, 2004). Numerous studies have found a relationship between personality traits, and well-being: Particularly the traits of extraversion and neuroticism have been found to influence well-being where higher levels of extraversion are associated with higher levels of well-being and higher levels of neuroticism with lower levels of well-being (for a review, see DeNeve & Cooper, 1998). However, there are many other factors which influence the subjective perception of well-being (Updegraff et al., 2004). Situational factors such as recent positive or negative events have been found to have a strong influence, as well as recent emotions (Suh, Diener, & Fujita, 1996; Updegraff, et al., 2004). In the current research, we focus on these situational factors and experiences at work.

For a long time, stress research has focused particularly on dramatic events and severely taxing situations (Kanner, Cojne, Schaefer, & Lazuarus, 1981). It is indisputable that major life events have a strong impact on the affected person's live, but they are relatively rare and thus their cumulative effect on well-being may not be as great as the effect minor events can have, which occur more frequently and thus may have a significant cumulative effect over time (Almeida, 2005; Kanner et al., 1981). One of the problems to the major life events approach is the fact, that it provides no clues about the processes trough time on how these events might have an impact on health (Kanner et al., 1981). A couple of decades ago, research on stressors and its impact on health and well-being has shifted its focus from major life events to the effects of minor events or daily hassles (Kanner et al.,1981; van Eck, Nicolson, & Berkhof, 1998). However, intense and short-lived emotions (e.g. emotional states), are difficult to operationalize trough typical surveys methods (Grandey, Tam, & Brauburger, 2002). With the development of new forms of questionnaires, where participants were asked on a daily bases to report their stressful or pleasant events of the day over a certain period of time and combining them with ratings of current mood, evidence started to piling up, that minor daily events are

indeed associated with changes in mood and perceptions of well-being (Marco & Suls, 1993; Stone, Neale, & Shiffman, 1993). These so called diary methods make it possible to analyze these smaller life events and how they influence daily well-being. Furthermore, these methods alleviate the memory distortion that can occur in the more traditional questionnaires where participants are asked to recall experiences over longer time frames (Almeida, 2005; Ohly, Sonnentag, Niessen, & Zapf, 2010).

Historically, the concept of subjective well-being has been assessed in terms of its hedonic and cognitive component (Updegraff et al., 2004). Commonly, the hedonic component refers to the balance of positive and negative emotional experiences in daily life, whereas the cognitive component is often seen in broader evaluations such as life satisfaction (Ryan & Deci, 2001; Updegraff et al., 2004). These two concepts capture distinct aspects, but are still related to each other. Emotional experiences are probably the most common source from which people form their judgments of life satisfaction (Suh et al., 1996; Suh, Diener, Oishi, & Triandis, 1998; Updegraff et al., 2004). In the last decades of the twentieth century many researchers became more and more interested in exactly those emotional experiences at work, their causes and consequences in the context of work (Wegge, Dick, Fisher, West, & Dawson, 2006). In this field of research, Weiss & Cropanzano (1996) presented the affective events theory (AET) as a new framework for studying emotions, moods and job satisfaction at work. AET focuses on structures, causes and consequences of affective experiences at work (Weiss & Cropanzano, 1996). The theory describes job satisfaction as an evaluative judgment about the job and is seen as a consequence of affective experiences at work. The central idea of this theory is that experiences made at work are proximal causes for affective reactions, which in turn have a direct influence on behaviors and attitudes. Also time is seen as an important factor in this theory, in that affective reactions fluctuate over time. The authors propose that patterns of these fluctuations of affective reactions influence both, overall feelings about one's job and also discrete behaviors at work (Weiss & Cropanzano, 1996). The introduction of the AET with its

conceptualization that work events are antecedents for affective states and subsequent attitudes and behaviors, also supported the introduction of the "new" within-person approach (Dimotakis, Scott, & Koopman, 2011). The recognition of the importance of these daily fluctuations in emotions and reactions, combined with technological advancements making multilevel analyses more accessible, resulted in a growing body of literature demonstrating the importance of workplace experiences and events on affective states and well-being (Dimotakis et al., 2011). Thus, a study by Grandey and colleagues tested how affective traits influence emotional reactions experienced in response to events at work and how these affective traits and states related to work attitudes and intentions (Grandey, et al., 2002). They found that trait-level negative affectivity related to negative emotional reactions at work, which in turn were associated with intention to leave the job. Positive affectivity (also on the trait-level) directly related to job satisfaction, but only weakly predicted positive emotional reactions at work. A study by Bono and colleagues found that positive events build resources, whereas negative events deplete resources and that positive work events were associated with reduced stress and improved well-being (Bono et al., 2013). Van Eck and colleagues found that prior events had a persistent effect on current mood in the sense that perceived stress was associated with a greater and more intense affective reactivity to current events (negative as well as positive affect; van Eck et al., 1998). In sum, it can be said that the importance of emotions in the workplace for organizational attitudes and behaviors cannot be denied (Arvey, Renz, & Watson, 1998; Grandey et al., 2002; Weiss & Cropanzano, 1996). Employees have higher levels of work-related well-being if they are satisfied with the work they do and experience frequent positive emotions and infrequent negative emotions (Bakker & Oerlemand, 2011; Diener, Sandvik & Pavot, 1991).

As more and more research confirmed the connection between affective experiences at work and well-being, research has started to investigate the dynamic variations over time within individuals (Dimotakis et al., 2011; Ilies, Schwind, & Heller, 2007), rather than to use

only between-person approaches which primarily focus on predicting individual's average levels of affect and well-being at a certain point in time. As feelings of happiness and satisfaction clearly differ between individuals (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000), to answer questions about day-to-day associations among events, moods, and behaviors the classical between-person approaches are not sufficient, rather within-person examinations are needed to capture variances in well-being over time (Reis et al., 2000). Indeed, in between-individual designs, such variances are treated as error, ignoring the fact that these fluctuations are likely to have a certain meaning and may be systematically associated with work outcomes (Dimotakis et al., 2011; Ilies, Scott, & Judge, 2006).

One way of analyzing daily fluctuations of affective states is true diary studies. In this type of studies, participants provide frequent reports on experiences of their daily lives, permitting to capture life as it is lived (Bolger, Davis, & Rafaeli, 2003). The biggest advantage of this method is the fact that it allows to capture daily experiences (also smaller events) in their natural context and the moment they are lived, or almost, reducing the problem of recollection bias (Bolger et al., 2003). In diary studies participants report their experience the same day they experienced them, ideally shortly after the situation occurred. In contrast, the more classical approaches ask participants to retrospect over weeks and months to provide summary accounts of psychological states and experiences, which can lead to severe recollection biases. For instance, people tend to better remember bad experiences, compared to good ones (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), which in turn can lead to a bias in the reported experiences. By reporting the experience shortly after it is lived, this kind of bias can significantly be reduced.

One of the most valuable features of diary methods is that they allow the assessment of within-person processes (Almeida, 2005). So, instead of asking if participants who experienced more stress compared to others also have stronger health impairments, with the

diary approach a researcher can find answers to the question of how daily fluctuations of perceived stress within one individual influence well-being. "Diary methods allow work and organizational psychologists to study thoughts, feelings, and behaviors within the natural context as well as characteristics of the work situation which may fluctuate on a daily basis" (Ohly, et al., 2010, p. 80). Diary methods, thus, offer the possibility to analyze such fluctuating events (Ohly et al., 2010). They permit to collect data at the daily level or even several times a day. Data from the same individual are collected several times, on a certain number of consecutive days or multiple times a day. In comparison to cross-sectional and longitudinal study-designs where data is collected just once or with time lags of months or even years in between, diary methods allow to capture the short-term changes and fluctuations of experiences within and between individuals (Ohly et al., 2010). In our study we combined two forms of diary methods: 1) event sampling, where participants had to fill out a short questionnaire after a positive or negative event which happened during the day; and 2) a daily questionnaire, which participants had to fill out at the end of every work day.

1.5   Disentangling within- and between- person effects

In psychology, many theories focus either implicitly or explicitly on within-person processes (Curran & Bauer, 2011; Dalal, Bhave, & Fiset, 2014). Some might even say that most theories in psychology refer to processes, which transpire within persons over time (Hoffman & Stawski, 2009). Despite the interest of these within-person processes, many of the research conducted to evaluate these theories involves the collection and analysis of exclusively between-person data (Curran & Bauer, 2011; Hamaker, 2012; Molenaar, 2004). Over the last decade, there has been growing recognition of the importance to focus on these within-person processes (Curran & Bauer, 2011). Many researchers have started to study within-person fluctuations on a daily bases using diary-methods to gather data or through the more traditional

longitudinal data (Bolger et al., 2003; Oishi, Diener, Suh, & Lucas, 1999; Singer &Willett, 2003). However, the establishment of temporal precedence, reduction of alternative models and increases in statistical power are still the most praised strengths of longitudinal data (Muthén & Curran, 1997). It is much less common to see, that the emphasis is placed on the fact that longitudinal data allow for the separation of between- person and within-person effects (Curran & Bauer, 2011).

In Psychology, as in many other fields, longitudinal data are essential for developing and testing theories. Not only do longitudinal data allow for establishing temporal precedence (West & Hepworth, 1991), increasing power (Muthén & Curran, 1997), and reduction of alternative explanations of cross-sectional effects (MacKinnon, 2008), but they also allow for simultaneous examination of both within-person change and between-person differences (Curran & Bauer, 2011). When data from the same individual are collected over multiple points in time, the resulting data contains both information about between-person as well as within-person differences (Raudenbush & Bryk, 2002). This kind of data offers the opportunity to identify relationships which hold on a within-person level as well as relationships which hold on a between-person level (Curran & Bauer, 2011). The importance for the disaggregation of the two levels of effects derives from the fact that effects happening at one level, cannot automatically be assumed to happen in the same way on the other level. An example which nicely illustrates the different effects which can occur on the two levels can be taken from the medical literature: Studies have shown, that it is more likely for an individual to experience a heart attack while exercising (positive within-person relation), but at the same time, people who exercise more have a lower risk of suffering from a heart attack in general (negative between-person relation; Curran & Bauer, 2011). A similar example is the study by Schwartz and Stone (1998). They found blood pressure to be lower for people who tend to exercise more (negative relationship at the between-person level), whereas blood pressure tends to be higher on occasions when a person is exercising compared to occasions where he or she is not exercising

(positive relation at the within-person level). Another example is the study conducted by Tennen and colleagues (Tennen, Affleck, Armeli, & Carney, 2000) where they showed how longitudinal data might contain differing between- and within-person effects: In their 60 consecutive days diary-study they collected data from 93 moderate to heavy drinkers. When looking at the between-person data, they found that higher average daily drinking was associated with lower average daily emotion-focused coping. However, when they estimated this relation within persons, they found that participants consumed more alcohol on days when they also used emotion-focused coping strategies. They concluded that the within-person relation of drinking resulting in more positive coping strategies and less anxiety had a reinforcing effect, such that people with higher anxiety were then more likely to drink more alcohol compared to those with lower anxiety. These findings show that although the findings at between and within levels contradict each other, they are still both valid, and both findings have implications for public health and the development of interventions (Tennen et al., 2000). It results that something happening at one level cannot be automatically assumed to happen at the other level in the same direction as well (Dalal et al., 2014). This would be an error of inference. Furthermore, examining only one level, does not allow a full understanding of the processes (Curran & Bauer, 2011; Ilies et al., 2007).

Since most longitudinal studies in psychology have not separated between- and within-person effects, it is difficult to know how often between- and within-person effects actually diverge in reality. However, methodologists who study longitudinal data structures concur that these effects often differ (Hoffman, 2015; Snijders & Bosker, 2012). Molenaar (2004, 2008) has mathematically demonstrated under which conditions between-person and within-person relations will be equal. He claims that many psychological processes will probably not satisfy these stringent conditions (ergodicity, which implies that population moments e.g. means, variances, covariances must be identical to the corresponding within-person moments; Hamaker, 2012). Thus, since many psychological processes may not be the same at the

between- and the within-person level, there is a need for methods that can accurately uncover these differences and studies which take this possible difference between the levels into consideration. Multilevel methods offer these possibilities: Data can be collected and analyzed simultaneously at multiple levels of inference. The challenges of multilevel data have long been discussed in fields such as education (e.g., students grouped within classrooms), epidemiology (e.g., persons grouped within neighborhoods), and sociology (e.g., persons grouped within countries). As early as in the 50's Robinson (1950) was the first to recognize and demonstrate how "ecological relations", or between group correlations, cannot be used to draw conclusions about "individual correlations". This incorrect use of ecological correlations as substitutes for individual correlations was later described as "the ecological fallacy" (Selvin, 1958). Alker (1969) described the ecological fallacy as the effects of when the grouping variable and within-group covariation interfere with the relation between ecological and individual effects. Likewise, an atomistic fallacy occurs when individual behavior is used to draw false conclusions about population behavior (Riley, 1963). Robinson defined individual correlations as those where the statistical object is indivisible, and he defined ecological correlations as those where the statistical object is a group of persons or objects. At the time when his article was published in 1950, ecological correlations were prevalent in influential studies. Although the studies used ecological correlations, the authors were not necessarily interested in relations at the ecological (or group) level. On the contrary, many researchers at that time used ecological studies to discover information about individuals. Robinson (1950) claimed, "Ecological correlations are used [in current literature] simply because correlations between the properties of individuals are not available" (p. 337). Now a day, as researchers we have at our disposition instruments to collect data at individual levels as well as the statistical tools to analyze and understand the data. Longitudinal studies as well as diary-studies allow for the disaggregation of the two levels of analyses and multilevel analyses offer the statistical tools needed to separate the two levels and to interpret them separately. Indeed, much of the recent literature on the

ecological fallacy suggests that multilevel models should be used when individual-level data are available, so that effects at both individual and aggregate levels can be examined simultaneously. The limitations of single-level models (including the problem of ecological inference) can be overcome by estimating both levels in one single model (Diez-Roux, 2000). It is important to consider that variables may operate at multiple levels. If a level is left out of the analysis, variance associated with that level will be redistributed to the next lower and next higher levels (Snijders & Bosker, 2012). Erroneous standard errors may be obtained for coefficients of variables that are defined on this level and consequently, tests of such variables will be unreliable (Snijders & Bosker, 2012).

Also in the field of employee well-being, the vast majority of research has focused on between-individual differences, although this research focus ignores within-individual variations in well-being states (Bakker, 2015; Ilies et al., 2007). This focus discounts the role of discrete (momentary) situational influences on employee well-being and does not allow for a complete understanding (Ilies et al., 2007). Some researchers have stated that there is a need for research on employee well-being to integrate a multilevel approach, where a differentiation between general and daily levels of well-being is in the center but with a model which tries to connect both levels (Bakker, 2015; Ilies, Aw, & Pluut, 2015). Studying not only the between-individual differences but also the intra-individual changes in well-being adds great value to understanding well-being as well as its causes and consequences (Bakker, 2015; Ilies et al., 2015). Some attempts to propose such models have been made, but none have really found a strong foot hold in research until now (multilevel model of employee well-being: Bakker, 2015; Dynamic well-being model: Ilies et al., 2007). As Ilies and colleagues state (Ilies, et al., 2015), adopting within-individual perspectives in the study of employee well-being does not only add value to a better understanding of well-being but also complements the findings from between-individual studies. Integrating both perspectives will allow for a more complete understanding of the processes influencing employee well-being (Ilies et al., 2007).

As yet, there are not many studies comparing both levels. As mentioned earlier, results from other fields suggest that results found on the between-person level cannot automatically be generalized to the within-person level and vice versa. Although there are not many studies concerning this comparison in the field of well-being research, there are results, which suggest that a difference of effects at different levels might be worthwhile to analyze. Not only the direction of effect may vary between levels, but also the size of the relationship may differ across levels (Dalal et al., 2014). So, Fisher (2003) found that the "happy-productive worker" hypothesis is more likely to find support at a within-person level of analysis. Although it might be true that happy workers may not be much more productive than unhappy workers, it is much more likely that a worker may be more productive on occasions when he or she is happy compared to occasions when he or she is unhappy (Fisher, 2003). The results confirmed this: The effect did go in the same direction at both levels, but the size of the effect was bigger at the within-person level (Dalal et al., 2014). We think a similar reasoning might be true for appreciation. Research questions pertaining to appreciation are maybe best posed at a within-person level, in the form of cognitive, affective, and ultimately, behavioral responses to discrete events experienced by a given person over time. Such a perspective would also provide a central role to affect and how it fluctuates within a person over time in response to events appraised. On the other hand, often the effects on different levels are comparable (Sonnentag & Fritz, 2015).

Intra-individual changes refer to temporal comparisons over time, with one's own previous values as the point of reference. Inter-individual changes refer to changes in rank-order, that is, in one's position in a sample. Thus, the two effects are based on different comparisons. The first comparison is temporal in nature and relates current experiences to previous ones; it is intra-individual and is reflected in within-person analyses. In this temporal comparison current events or circumstances are being compared to earlier ones, and this comparison may involve many considerations known only to the individual and not be restricted

to events that are publicly known. The second comparison is social in nature and relates own experiences to others and to social norms, is inter-individual and is reflected in between-person analyses. *Social* comparison involves a comparison with others in one's environment, with others in similar positions elsewhere, with generalized others, or with an internalized social norm (Pettigrew, 2016). Social comparisons therefore are likely to refer to events/circumstances that are "publicly" known. It is well established, that people appraise the meaning and importance of their experiences in both ways (Strickhouser & Zell, 2015; Zell & Alicke, 2009). Based on these considerations, we state that processes happening at one level can not automatically be assumed to happen at the other.

To answer the question if appreciation has the same effect on well-being on an intra-individual level as well as on an inter-individual level, the first article of this research project focuses on the disentangling of within- and between-processes in longitudinal data.

2   Dissertation project

2.1   Swiss National Science Foundation project

This dissertation was part of the project "Appreciation at Work and Its Consequences: A Longitudinal Diary Approach" funded by the Swiss National Science Foundation. The aim of this project was to focus on appreciation in the research area of stress and well-being at work. Particularly, the aim was to collect longitudinal data as well as employ a diary approach to measure daily events at work to allow the analysis of inter-individual differences as well as intra-individual fluctuations regarding the focal variable: appreciation.

Study design

The study included three waves of measurement with a lag of two months between each wave. Measures included a) a general questionnaire, b) recordings of positive as well as negative events throughout the work day, with a special emphasis on appreciation, and c) daily recordings of mood at the end of the workday (Figure 1).
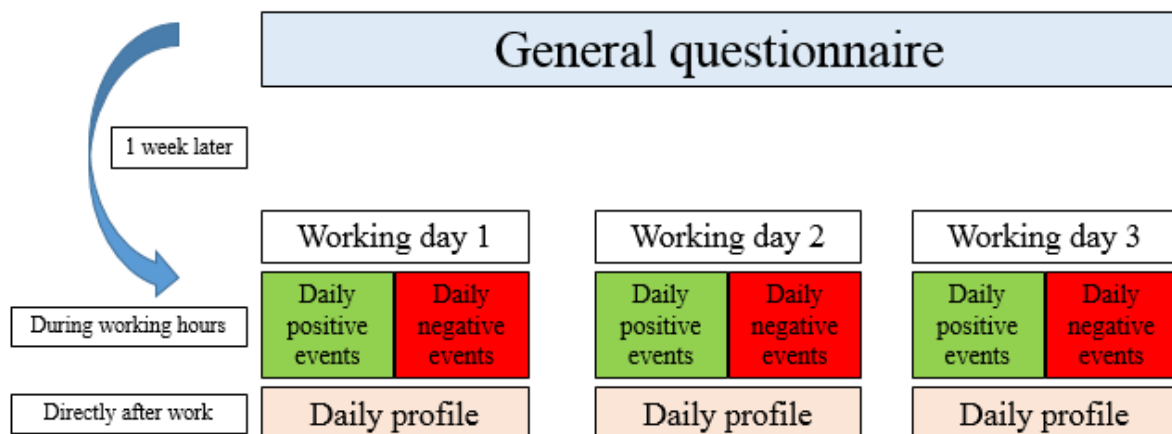

Figure 1. Overview of one study wave.

We contacted the HR-representatives of 20 organizations in Switzerland and sent them material about the study. Six of these organizations agreed to participate and informed their employees about the study by passing on our material. These organizations comprised a hospital, a library, a telecommunication company, a production firm, and two government institutions. HR then sent us a list with e-mails of employees agreeing to participate. Data were collected over three waves with a time lag of two months between each wave. Employees could fill in questionnaires during working hours. Unfortunately, our procedure of concocting the sample does not allow us to calculate a participation rate, as most organizations did not contact employees directly but rather via supervisors, not all of which passed the information on to their employees. We therefore do not know the number of employees who received our information.

Altogether, 308 Swiss employees participated in the study from June 2013 to January 2014. A wide variety of jobs was represented in the sample: nurses, doctors, engineers, economists, administrators, quality specialists, assistants, financial specialists, prison guards, politicians, logistic experts, HR-specialists, account managers, and IT-specialists. Of the 308 who participated at time 1, 253 (82.1%) also participated at the second wave of measurement, and 216 (70.1%) at wave 3.

Although some approaches include appreciation as a resource, appreciation has seldom been analyzed as a resource in its own right in research on stress and well-being at work. The main objectives of this research project were to investigate the importance of appreciation in comparison to, and possibly in interaction with other important aspects of work (stressors, resources) both in inter-individual as well as intra-individual analyses.

2.2   Project objectives

The main objectives of this research project were four:

1) The first aim was to longitudinally test the hypothesis that appreciation predicts well-being over time (Paper I & III).

2) The second aim was to investigate longitudinally if different sources of appreciation are more important than others. We expect appreciation by supervisors to be especially important (Papers I-III).

3) A third aim was to test if appreciation interacts with stressors, such that the effects of stressors are attenuated if appreciation is high (Paper I & Paper II).

4) The fourth aim was to investigate experiences of appreciation and their short-term consequences in terms of immediate reactions as well as well-being at the end of the work day in an intra-individual manner. We expect that appreciation will have a stronger impact in general, and on specific pleasant emotions, such as pride, than other pleasant events. We also expect events associated with appreciation to interact with negative events, so that their effects on well-being at the end of work are stronger when negative events have occurred as well (Paper II).

3   Summary of the articles

In the first article we examined the effects of appreciation and illegitimate tasks on affective well-being in the context of work, trying to disentangle within and between effects. For a long time, research has focused on inter-individual differences, but results were often interpreted in terms of intra-individual processes. In recent years, intra-individual differences have increasingly found more focus in research, but inter- and intra-individual effects are rarely analyzed simultaneously. Regarding appreciation at work as an important resource, we expected it to predict higher affective well-being, whereas the new stressor concept of illegitimate tasks should predict lower well-being. We also expected appreciation to moderate the relation between illegitimate tasks and affective well-being. We performed a series of longitudinal multilevel structural equation models to test our hypotheses. Results showed that appreciation predicted affective well-being in the expected direction both on the within-level as well as the between-level, whereas illegitimate tasks had a stronger effect on the between level. On the within- level, the moderating effect of appreciation could be found for two of the four facets of affective well-being, demonstrating a convergent and pervasive effect of appreciation on both levels but diverging effects of illegitimate tasks, implying that finding on one level may, but need not work on the other level as well. We explain the different effects of illegitimate tasks at the two levels of analyses by arguing that the greater public visibility of illegitimate tasks supports main effects that are not easily compensated at the inter-personal level, whereas intra-personal considerations lend themselves more easily to taking compensating effects into account.

The second article examined how daily perceived positive and negative experiences at work, with a special focus on appreciation, are associated with daily affective well-being after work. In particular, we wanted to examine if appreciation has a buffering effect on employees' daily affective well-being as well as how daily positive and negative events at work influence

daily fluctuations of well-being after work. We expected people to report higher levels of well-being after work on days where they experienced more pleasurable events (H1). Moreover, given the importance of resources for employees' well-being in the context of work, we expected that appreciation as a resource is more than a simple positive event at work and explains additional variance in affective well-being after work (H2). We also wanted to test, if appreciation is indeed more than social support (H3). Furthermore, based on the findings from several previous studies which found that resources are particularly important for well-being under adverse circumstances, we expected appreciation to be especially salient on days, where people also experience negative events (H4). Based on the buffering hypothesis within the job-demands-resource model (Bakker & Demerouti, 2007), we expected appreciation to influence well-being after work by moderating the relation between daily hassles and well-being after work protecting employees from potentially adverse effects of stressful events (H5). To test our hypotheses, we performed a series of multilevel structural equation models. Pleasant events at work predicted affective well-being after work (serenity) in the expected direction. Appreciation from supervisors (but not from coworkers), predicted serenity over and above pleasant events as well as social support. When faced with adversities that same day, appreciation from supervisors as well as from colleagues predicted serenity in the expected direction (over and above pleasurable events and social support). And last but not least, appreciation from supervisors (but not from colleagues) was found to moderate the relation between well-being after work and unpleasurable experiences that same day.

In the third article we tried to better understand the mechanisms behind the positive connection between appreciation and well-being at work (in this case work satisfaction). We tested the mediating roles of subjective success and feelings of resentment between appreciation and job satisfaction over 3 time points. Results confirmed the mediating role of both tested variables. Appreciation leads to more feelings of subjective success, which in turn lead to higher levels of job satisfaction over time. Appreciation also leads to lower levels of feelings of

resentment, which in turn would lead to lower levels of satisfaction if they were higher. Our test of the reverse model revealed that job satisfaction at time point 1 predicted appreciation at time point 3, indicating a reciprocal process between these two variables; they seem to reinforce each other over time, possibly leading to an upward spiral (Salanova, Bakker, & Llorens, 2006). However, the mediation processes are confined to the path from appreciation to later job satisfaction.

4   Discussion

The first objective of the study was to longitudinally test if appreciation indeed predicts well-being over time. The first and third paper present longitudinal data and tried, among other things, to answer this question. In the first paper, we did not choose the "classical longitudinal" approach. Rather, we decided to follow the call of Bakker (2015); Curran and Bauer (2011), and Ilies and colleagues (2015) who argue for a joint consideration of inter-individual and intra-individual aspects in the analysis of well-being. As past research in other areas has shown, effects happening at one level, cannot automatically be assumed to happen in the same way on another level (Curran & Bauer, 2011; Dalal et al., 2014; Hoffman, 2015; Molenaar, 2004, 2008, Robinson, 1950; Snijders & Bosker, 2012; Tennen et al., 2000). We decided to take these considerations to heart and wanted to find out, if the effects of appreciation happening at the between-person level, are also true for the within person level. As we show in our first paper, the same processes cannot be assumed to be the same at both levels. Although the direction of effects was the same, the size was not: Appreciation did have a positive effect on well-being on a between as well as on a within person level, but the effect was stronger on the within person level. Similarly to Fisher's findings (2003), who found stronger results for the happy productive worker hypothesis on a within-person level as compared to the between-person level, similar findings are true for appreciation. The direction was the same, but the size of the effect bigger

at the within-person level. The findings confirm, that appreciation predicted well-being on a between-person level (comparison with others) as well as on a within-person level (comparison within a person over time).

Also curious is the result we found for illegitimate tasks (Paper I). Here the effect also went in the same direction at both levels, but the effect was significant only on the between-person level this time. This finding was most interesting, since for once, good seems to be stronger than bad (see Baumeister et al., 2001), and the results are once more a confirmation for the fact, that the same effects cannot be assumed to be the same at different levels of analyses. We cannot automatically generalize the findings from between-person results to within-person processes, and vice versa.

Also in our third paper, we presented longitudinal data. The findings also confirmed that appreciation predicted job satisfaction (an indicator of well-being in the context of work), over time confirming previous findings (Semmer et al., 2005, 2006; Stocker et al., 2010). We can therefore confirm that appreciation predicts well-being over time and confirm the hypothesis from the first objective of this project.

The second objective of this dissertational project was to investigate if different sources of appreciation are more important than others. In our analyses we found that, indeed appreciation predicted different indicators of well-being over time, most strongly so for appreciation from supervisors and colleagues. In our sample we never found a significant result for appreciation from clients. This could also be due to the fact, that in our sample less than 50% of employees had regular contact with clients, so maybe we did not have enough data pertaining to this source of appreciation. We did not publish a study examining exactly the difference between the sources, but based on all the additional analyses we made on our data (data not shown in the papers), for our sample we can state without a doubt that appreciation from supervisors was the most important source of appreciation, followed by co-workers and

last by clients. In all three papers we present results from appreciation from supervisors and colleagues only, leaving out appreciation from clients. In the first and third paper we used an aggregate variable, combining appreciation from supervisors and colleagues, whereas in the second paper we separated the two sources of appreciation.

It is important to mention that supervisors were not the most frequent source of appreciation, but they had the strongest effect on employee well-being. Co-workers were the most frequent source of appreciation (44%, followed by supervisors 27%, clients 20%, and other sources 9%), which makes sense since most people report spending more time with their work colleagues as compared to the supervisors, which in turn leads to many more possibilities of offering, respectively receiving appreciation from a colleague.

The third aim of the project was to test if appreciation interacts with stressors, such that the effects of stressors are attenuated if appreciation is high. As several researchers have pointed out, resources may work as a buffer on the relation between job demands and job strain (Bakker & Demerouti, 2007; De Jonge & Dormann, 2006; Dormann & Zapf, 1999; Jex & Bliese, 1999), in the sense that high job demands can have a deleterious impact on health and well-being, unless workers have sufficient job resources to deal with their demanding jobs. The resource works as a buffer and prevents stressors from developing their impact on strain (Dormann & Zapf, 1999). In our first and second paper we tested interactional effects between appreciation and illegitimate tasks as a stressor (Paper I), and with negative daily events (Paper II). In the first paper we found that appreciation did indeed buffer the negative effect of illegitimate tasks on affective well-being, but only on a within-person level. So, on occasions where a person received more appreciation compared to other occasions, appreciation could attenuate the negative influence of illegitimate tasks on well-being. The same could not be found on an inter-individual level. Once more, these results show how important it is to distinguish between the levels of analyses and not to draw conclusions from one to the other.

The fourth aim of the study was to investigate appreciation and the short-term consequences on well-being on an inter-individual manner. We also wanted to find out, if there was an interplay with positive and negative daily experiences at work. As well-being has both a stable component and a varying component, which may fluctuate from day to day, diary studies allow to capture also this small-events. In our second article we present data from our diary study, where we captured the short-term fluctuations in appreciation, indicators of well-being as well as how many positive and negative experiences participants made daily. Again, appreciation from supervisors had the strongest effect on well-being (in this article serenity after work). Also appreciation from colleagues had a significant effect on well-being after work, but only when participants were confronted with negative experiences that day. Furthermore, we found that, as mentioned before, appreciation from supervisors buffered the negative impact of daily negative events. Furthermore, the above-mentioned results remained after controlling for social support from supervisors and colleagues. This finding supports previous studies (Stocker et al., 2010) stating that appreciation is more than a form of social support and a construct in its own right. Again, this could not be confirmed for appreciation from colleagues.

Practical implications. One of the core components of a successful business is the employee's desire to do a good job (Nelson, 2006). Organizations depend on it to be competitively viable in today's market. As argued in the introduction, retaining the best employees is very important for organizations. Departing employees often take with them valuable knowledge and expertise, gained through their experience (Mitchell et al., 2001). Losing key employees leads to high costs for the organizations. Often, they have established close relationships with clients or employees from other departments, which make work more efficient. In addition to these indirect and less quantifiable costs, organizations also face many costs directly related to turnover: The entire hiring process but also costs for overtime or temporary workers until the hiring of the new person plus training costs for the new employee.

Fortunately, the awareness for the detrimental causes for stress has been growing over the last couple of decades or so. Some organizations have responded to this and other business challenges, by creating workplaces that do more than just improve productivity (Stambor, 2006,). We argue that appreciation could play a key element for employee well-being and consequently also for effective retention of employees, and especially supervisors play a key role. "Leaders play an important role in defining an environment in which employees can thrive and experience well-being" (Skakon et al., 2010, p. 108). Our data also suggest, that through appreciation, especially supervisors can have a positive effect on employee well-being.

Especially the buffering approach can be interesting for practitioners as well, since often the stressors cannot be reduced, the negative effect of high stressors can be compensated for by increasing resources (De Jonge & Dormann, 2006; Dormann & Zapf, 1999). Appreciation might present a good opportunity to do so. It is an alternative which does not take too much time and is not very costly. But it is important to keep in mind, that we cannot just conclude that if more appreciation is given in general, this will automatically have the desired effect. It will still depend on the within-person comparison, in other words, on how much appreciation the single individual feels he receives and if he receives more or less compared to other situations.

In everyday working life, appreciation has found a foothold. For example, appreciation finds application in practice with the "Appreciative inquiry" from Cooperrider (Cooperrider & Whitney, 2005). This tool sees appreciation as a major component in organizational development and management. This approach focuses on the strengths rather than on the process of problem-solving and fixing. Problems are examined from a positive perspective, because appreciative inquiry "suggests the idea that collective strengths do more than perform – they transform" (Cooperrider & Whitney, 2005, p. 2). Another example is the yearly study for the "Great place to work" performed in 50 countries in the world. In Switzerland, this

association was founded in 2008. Through a questionnaire filled out by the employees of the participating organizations, every year a "best workplace" is chosen for each country. Appreciation is one of the nine elements comprised in the evaluation tool.

Future research. In addition to the practical implications, this study leads to further questions for future research. For one, more longitudinal studies are needed to really confirm the beneficial effects of appreciation on well-being over time. Also, the question of how long the positive effects of appreciation hold, could be very interesting.

Another question which arose from this study is the question, if an adaptation to resources, specifically also to appreciation exists. We found that appreciation from colleagues was reported more often than appreciation from supervisors, but still appreciation from supervisors had by far the strongest effect on employee well-being. We asked ourselves what could be the cause for this. Maybe it relies on the fact that appreciation can be used as an important instrument for leadership (Jacobshagen & Semmer, 2009), or because appreciation from supervisors puts demands in another perspective alleviating the negative influence of job demands on strain (Bakker et al., 2007). But we also wondered if this fact could not be due to some kind of adaptation. Appreciation from colleagues is much more common than appreciation from supervisors. Could it be, that somehow the effect of appreciation "loses" weight over time? A widely accepted view of the impact of life events was theorized already in 1964 by Helson with the adaptation level theory. From this perspective, the substantial change in life circumstances is temporary. People tend to react more strongly to changes compared to stable conditions, rendering them more sensitive to new conditions. Change, therefore, produces stronger reactions, but the circumstances that result from the change gradually cease to elicit a reaction and eventually become taken for granted (Baumeister et al., 2001; Diener et al., 1999). Could this also happen for resources? If indeed an adaptation to resources (appreciation) is taking place over time, this would implicate that a "best strategy" for giving

appreciation could be true changing the way appreciation is given every now and then. As we mentioned before, the most common way of giving appreciation in the context of work is though praise. But appreciation can be expressed in many different ways. If a kind of adaptation is taking place, then it would be to a specific form of appreciation, and by changing the way appreciation is given from time to time, this adaptation process could be prevented. To our knowledge as yet there is no research analyzing the adaptation to resources (appreciation). This could be an interesting question for future studies analyzing resources.

Another question we feel could be important in the better understanding of appreciation and which found no attention in this study, is the question of how people perceive appreciation. To our knowledge, little or no attention has focused on the question, if we all perceive appreciation as equally important. The answer is probably "no". What could influence the importance each of us places on being appreciated or not for our job? Another open question is, if we are all equally capable of accepting appreciation. Also here, the answer is probably "no". If the boss praises an employee during a meeting, probably not everyone will perceive this as a positive experience. The rather timid person could feel put in the spotlight and perceive it as an unpleasant situation. Depending on the team-climate, this could lead to jalousies from other co-workers or a feeling of injustice (Bies, 2001, p.91). Many factors can influence if we accept appreciation and which form of appreciation we prefer. Some people may prefer to receive a more "private" praise from their supervisor, for example in a meeting where only the two of them are present. On the other hand, others may like it if the praise is given in an open and visible to all setting.

Furthermore, in the daily experiences of pleasant situations and appreciation, an interesting question arises. As we have seen, the more pleasurable experiences people make at work, the better they feel after work. This statement can also be looked at from another angle: Evidence exists, that the mere engaging in acts of kindness, e.g. giving people around us the experience

of a pleasurable event at work, in turn also gives the person acting a higher feeling of well-being (Emmons & McCullough, 2003; Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011; Seligman, Steen, Park, & Peterson, 2005). So, by engaging in this kind of behavior, it's not only the recipient who profits from the exchange, but also the other party. As Adler and Fagley (2005) argue, the act of expressing appreciation to others builds social bonds. It could be plausible to expect appreciation to have not only positive effects on the once receiving it but also on the once giving it. Future research could examine, if this is indeed true for people engaging in appreciation. Adler and Fagley (2005) further argue that although appreciation is viewed as a disposition, it is also viewed as something people can learn over time. So, trainings for appreciation could be an interesting addition to leadership trainings.

To conclude, we can say that this study was an important step in the better understanding of the workings and processes behind a resource which has not found much focus in research until now. Much remains to be done in future research, to really affirm this interesting resource as an important concept in its own right.

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6   Dissertation articles

Article I

Appreciation and Illegitimate Tasks as Predictors of Affective Well-being:
Disentangling Within- and Between-Person Effects

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Abstract

This study examines the effects of appreciation and illegitimate tasks on affective well-being, postulating main effects as well as interactions. As empirical results often refer to inter-individual effects but are interpreted in terms of intra-individual effects, we try to disentangle the two. In multilevel structural equation models with data of 308 participants who filled in questionnaires at three times, with a time-lag of two months, appreciation predicted affective well-being in the expected direction both on the within-level and the between-level, whereas illegitimate tasks had a stronger effect on the between level. On the within-level, appreciation buffered the effect of illegitimate tasks for two of the four facets of affective well-being. Demonstrating a convergent and pervasive effect of appreciation on both levels, but diverging effects of illegitimate tasks implies that finding on one level may, but need not work on the other level as well. Theoretically, we propose to discuss differences in within-person and between-person effects not only in terms of stability versus fluctuation, but also in terms of the nature of the standard of comparison; this standard being interpersonal on the between-person level and temporal on the within-person level may imply that different events/circumstances are salient in these comparisons.

Practitioner Points: appreciation, illegitimate tasks, intra-vs. inter-individual, well-being

Word count: 199

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Appreciation and Illegitimate Tasks as Predictors of Affective Well-Being: Disentangling Within- and Between-Person Effects

Stress-as-Offense-to-Self (SOS) theory (Semmer, Jacobshagen, Meier, & Elfering, 2007) is based on the well-established notion that preserving a positive self-view is a basic human concern, and that threats to the self are a source of stress. In the context of SOS theory, the present paper focuses on appreciation as a resource that boosts self-esteem, and on illegitimate tasks as a stressor that represents a threat to the self. SOS theory (Semmer et al., 2007) focuses on the need to maintain high self-esteem, in terms of both personal and social self-esteem (Alicke & Sedikides, 2009; Leary, 2012; Miller, 2001). Semmer and colleagues (2007) argue that appreciation is a key concept regarding boosts to the self. Appreciation implies recognition of one's qualities and achievements; signals acceptance and acknowledgment, and thus responds to the need to belong (e.g., Leary, 1999) and boosts self-esteem (Harter, 1993). Social esteem can be threatened by signals of lack of appreciation by others (called *stress as disrespect*, or SAD, in SOS theory). These signals constitute stressors which trigger individual strain. Disrespect can be expressed directly or indirectly (Semmer, Meier, & Beehr, 2016). Based on SOS theory (Semmer et al., 2007), and based on the importance of a joint analysis of stressors and resources (Job- Demands-Resources model, Bakker & Demerouti, 2007, 2017), in the present paper we focus on a resource that represents a boost to the self (appreciation) and a stressor which threatens the self (illegitimate tasks), analyzing how they influence affective well-being at work.

Stressors and resources as predictors of well-being have been investigated in numerous studies (e.g., Danna & Griffin, 1999; Ganster & Rosen, 2013; Sonnentag & Frese, 2013). Most of these studies have focused on inter-individual differences (see Bakker, 2015; Cropanzano & Dasborough, 2015; Ilies, Aw, & Pluut, 2015). More recently, intra-individual aspects have increasingly been investigated (see Ilies et al., 2015; Ohly, Sonnentag, Niessen, & Zapf, 2010), and such studies have increased our understanding of fluctuating aspects of many phenomena,

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in addition to their stable aspects. Ilies et al. (2015) called for joint consideration of inter-individual and intra-individual aspects. The current study corresponds to this call: We investigated the independent as well as the interactive association of appreciation and illegitimate tasks with affective well-being both on the inter-individual and the intra-individual level.

Disaggregation of Between-person and Within-person Influences

Many theories in psychology make assumptions about within-person processes, albeit often implicitly. Thus, when a theory postulates that a given stressor is likely to influence well-being, many will assume that people should feel better at times when that stressor is not present, as compared to times when it is (Ilies et al., 2015). However, such theories have been tested mostly with regard to between-person effects (Curran & Bauer, 2011; Ilies et al., 2007).

It is increasingly recognized that greater emphasis should be placed on studying within-person processes and investigating how effects on one level relate to effects at the other levels, for instance in terms of how personality variables moderate the effects of situational stressors or how the reaction to short-term stressful experiences depends on the accumulation of previous stressful experiences (e.g. Bakker, 2015; Ilies et al, 2015). Frequently, effects on different levels are comparable (see Sonnentag & Fritz's, 2015, summary of between and within person effects of detachment), but there still is a need for more systematic efforts to disentangle the processes occurring at the different levels (Curran & Bauer, 2011; Ilies et al., 2015). This requires studying intra-individual differences in repeated measures (Collins, 2006; Curran & Bauer, 2011; Raudenbush, 2001). Longitudinal data can establish temporal precedence, reduce the number of possible alternative models, and increase statistical power (e.g., Muthén & Curran, 1997). Most importantly in our context, only longitudinal data allow for the disaggregation of between-person and within-person effects (Curran & Bauer, 2011).

Although the number of intra-individual analyses has increased over the last decades, inter-individual and intra-individual effects are often not considered simultaneously (Curran &

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Bauer, 2011). These effects may operate in the same, but also in opposite directions. Failing to allow for such differences and simply drawing conclusions from one onto the other may result in errors of inference (ecological fallacy, Robinson, 1950; Schwartz, 1994).

Following Curran and Bauer (2011), we present hypotheses regarding intra-individual as well as inter-individual effect, and try to disentangle these effects using multilevel structural equation modeling in a three-wave study.

Within- and between person influences: Possible Mechanisms. Intra-individual changes refer to temporal comparisons over time, with one's own previous values as the point of reference. Inter-individual changes refer to changes in rank-order, that is, in one's position in a sample. Thus, the two effects are based on different comparisons. The first comparison is temporal in nature and relates current experiences to previous ones; it is intra-individual and is reflected in within-person analyses. The second comparison is social in nature and relates own experiences to others and to social norms; is inter-individual and is reflected in between-person analyses. It is well established that people appraise the meaning and importance of their experiences in both ways (Strickhouser & Zell, 2015; Zell & Alicke, 2009). We therefore expect main effects for both types of comparisons.

For interactions, however, the type of events or circumstances that may act as buffers might be different for inter-individual and intra-individual comparisons, with public visibility as a potentially important aspect. *Social* comparison involves a comparison with others in one's environment, with others in similar positions elsewhere, with generalized others, or with an internalized social norm (Pettigrew, 2016). Social comparisons therefore are likely to refer to events/circumstances that are "publicly" known. Publicly known stressors may be more difficult to discount than more private ones. "A socially real, publicly known fact cannot be dismissed or ignored as readily as a fact that is known only to the self" (Baumeister, 1996, p. 34). More specifically, it might take resources that are also publicly known to counter such highly visible stressors. By contrast, in temporal comparisons current events or circumstances

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are being compared to earlier ones, and this comparison may involve many considerations known only to the individual and not be restricted to events that are publicly known. Many more events / circumstances are therefore likely to enter into temporal comparisons, including resources know only to the individual. Such resources may act as buffers even for highly visible stressors, and thus make interactions on the within-person level more likely than interactions on the between-person level.

Affective Well-Being

Well-being has an affective and a cognitive component (Diener, Suh, Lucas & Smith, 1999). In this study, we focus on the affective component of subjective well-being in the work context, which often is conceived in terms of the emotional circumplex (Yik, Russell, & Steiger, 2011). Each emotion can be seen as a combination of arousal and pleasure. Warr (2007) distinguishes between two axes, one ranging from depression to enthusiasm, the other from anxiety to contentment. On this basis, Warr proposes four quadrants, which represent different combinations of arousal and pleasure: Enthusiasm represents high arousal pleasant affect, depression represents low arousal unpleasant affect, anxiety represents high arousal unpleasant affect, and contentment represents low arousal pleasant affect. Although these constructs are correlated, they have been shown to represent distinct constructs (Mäkikangas, Feldt, & Kinnunen, 2007; Warr, Bindl, Parker, & Inceoglu, 2014). We, therefore, investigate the association of appreciation and illegitimate tasks with these four quadrants.

Appreciation as a Resource

Appreciation as a construct in its own right. The most frequently studied social resource to date is social support; it has been linked to better mental health, more stress resistance and better physical health outcomes (Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1997; Cohen & Wills, 1985; Viswesvaran, Sanchez, & Fisher, 1999). Appreciation, in comparison, has found much less attention. Although recognized as an important resource long ago by William James (1920), and despite findings showing that appreciation may be an

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especially important resource (van Vegchel, De Jonge, Bakker, & Schaufeli, 2002), appreciation has seldom been in the focus of research as a construct in its own right; rather it has often been mentioned as part of larger concepts (e.g., the effort-reward imbalance model: Siegrist, 1996; leadership: Yukl, 2013; or social support: Thoits, 1982). Semmer et al. (2007) argued, however, that appreciation is an important concept in its own right. Appreciation implies recognition of one's qualities and achievements; it signals acceptance and acknowledgment, and thus responds to the need to belong (e.g., Leary, 1999) and boosts self-esteem (Harter, 1993), and it does so in a very direct way (e.g. by praise; Stocker Jacobshagen, Krings, Pfister, & Semmer, 2014). Other constructs, notably social support, do entail appreciation; more specifically, through its emotional component, which refers to esteem, caring and respect (Beehr & Glazer, 2001). However, social support goes beyond emotional support, involving tangible help and information as well (instrumental support). Furthermore, social support is typically conceived as support in difficult times (Beehr & Glazer, 2001). In contrast, appreciation is not restricted to difficult times, but may be experienced at any time. Thus, measures of social support do contain appreciation but do not represent a "pure" measure of appreciation. Thus, Semmer et al. (2008) demonstrated that recipients of social support attributed the beneficial effects of *instrumental* support episodes largely to its emotional *component* (exclusively for 49% of the episodes, and partly in another 15%). If appreciation is such a central component of social support, it seems worthwhile to investigate appreciation directly, rather than only as part of the broader construct of social support. However, to test our claim that appreciation should be assessed directly, we control for social support in our analyses.

Existing studies have confirmed the effects of appreciation. Thus, a cross-sectional study by Stocker, Jacobshagen, Semmer, and Annen (2010) showed an association of appreciation with well-being indicators such as job satisfaction and reduced negative emotions, over and above social support and interactional justice. Bakker, Hakanen, Demerouti, &

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Xanthopoulou (2007) found that the positive effect of appreciation on work engagement was the strongest of six resources tested. Semmer, Jacobshagen, and Meier (2006) reported cumulative effects of appreciation, in that the number of times participants reported high appreciation at work predicted job satisfaction at the last wave in a study with four waves of measurement. A recent event sampling study found that appreciative events throughout the workday predicted well-being in terms of serenity after work intra-individually (Stocker, et al., 2014).

Intra- and inter-individual effects of appreciation. Intra-individual effects refer to temporal comparisons, evaluating whether one has recently received more, equal, or less appreciation compared to earlier times. As appreciation implies a boost to the self, a positive effect on well-being should occur at the within-person level to the extent that this evaluation yields a positive result. Inter-individual effects refer to social comparisons, involving others in comparable situations or an assumed general standard. A positive comparison in this social comparison should also boost the self, resulting in a positive effect on well-being at the between-person level. Thus, both effects are theoretically plausible. As within-person effects and between-person effects often occur simultaneously, (Strickhouser & Zell, 2015; Zell & Alicke, 2009), we expect appreciation to be related with well-being on both levels.

We postulate that appreciation is positively related to well-being, both on an intra-individual as well as on an inter-individual level. Specifically, we hypothesize:

Hypothesis 1: Both on the within-person and the between-person level, appreciation is positively related to enthusiasm (H1a) and contentment (H1b), and negatively related to depression (H1c) and anxiety (H1d).

Illegitimate Tasks as a Stressor

The concept of illegitimate tasks and pertinent research. Illegitimate tasks represent a type of task-related stressor, derived theoretically from role and justice theories within the framework of "Stress-as-Offense-to-Self" (SOS: Semmer et al., 2007, 2015). This theory is

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based on the widely accepted notion that preserving a positive self-view is a basic human goal (Alicke & Sedikides, 2009). Occupational roles typically contribute to people's self-view (Ashforth, 2001; Eatough et al., 2016). Roles entail expectations about what the role-incumbent can be expected to do or to be responsible for (Katz & Kahn, 1978). Illegitimate tasks focus on the other side, referring to tasks that *cannot* appropriately be expected from a given person, as they are not considered as part of one's work role (Semmer et al., 2007). There are two facets of illegitimate tasks, unnecessary and unreasonable (Semmer et al., 2015): Employees may think a task should not exist at all (e.g. having to write reports one expects to be disregarded during decision making); such tasks are called unnecessary tasks. Other tasks are perceived as somebody else's duty (e.g. a hospital physician having to organize beds for patients); such tasks are called unreasonable tasks. As roles not only reflect expectations, but also tend to become part of one's identity (Ashforth, 2001; Chreim, Williams, & Hinings, 2007; Haslam & Ellemers, 2005; Meyer, Becker, & Van Dick, 2006; Warr, 2007), violating role expectations is likely to offend one's professional identity. From that perspective, illegitimate tasks constitute "identity-relevant stressors" (Thoits, 1991), and thus a threat to the self. Furthermore, the assignment of illegitimate tasks fulfills the conditions for unfairness specified by Folger and Cropanzano (2001) in terms of three conditions, called: would, could, and should (see also Weiner, 2014). As illegitimate tasks are perceived as inappropriate, the focal person *would* be better off if he or she would not be assigned such tasks. Furthermore, the person assigning the task *could* and *should* have acted differently. Thus, illegitimate tasks are likely to be perceived as unfair. Lack of perceived fairness implies that one's interests and concerns are not respected as one would deserve (Miller, 2001). Such information is used to infer one's acceptance as a group member; thus, it signals one's social standing, which affects one's social esteem (De Cremer & Tyler, 2005).

Illegitimate tasks are not illegitimate *per se*; it rather depends on the context if they are perceived as such or not. A task may be considered legitimate in the context of a given role but

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not of another (e.g., organizing beds may be a legitimate task for administrative personnel).

Being assigned tasks one considers illegitimate signals a lack of respect for one's professional

role (Semmer et al., 2015).

Research on illegitimate tasks is just emerging, but encouraging. Illegitimate tasks have

been found to be associated with counterproductive work behaviour (Semmer, Tschan, Meier,

Facchin, & Jacobshagen, 2010), with stress and satisfaction among Swedish managers (Björk,

Bejerot, Jacobshagen, & Härenstam, 2013) and with reduced intent to remain and self-

determined motivation among volunteers (van Schie, Güntert, & Wehner, 2014). Madsen,

Tripathi, Borritz, and Rugulies, (2014) found a negative effect of unnecessary tasks on mental

health over time. Semmer et al. (2015) found negative associations of illegitimate tasks with

various indicators of well-being, such as burnout, self-esteem, and irritability beyond a number

of other stressors as well as organizational justice in two samples, and an effect on feelings of

resentment towards one's organization and irritability over time in a third sample. Schmitt,

Ohly, and Kleespies (2015) report motivating effects of time pressure only when unreasonable

tasks were low. Illegitimate tasks have been found to be related to turnover intentions (Apostel,

Syrek, & Antoni, 2017); to job satisfaction and intrinsic motivation (Omansky, Eatough, & Fila,

2016), and to student satisfaction, anxiety, and emotional exhaustion (Fila & Eatough, 2017).

Intra-individually, Kottwitz et al. (2013) demonstrated an effect of illegitimate tasks on

cortisol-levels, Eatough et al. (2016) on state self-esteem, Pereira, Semmer, and Elfering (2014)

on sleep quality; and Sonnentag and Lischetzke (2018) on negative affect and state self-esteem

at the end of a workday, and on psychological detachment from work. It therefore is fair to say

that the theoretically postulated negative effects of illegitimate tasks on well-being have now

been confirmed in a number of studies.

Intra- and inter-individual effects of illegitimate tasks. As with appreciation, it seems

theoretically plausible that people use both temporal (i.e., intra-individual) and social (i.e., inter-

individual) comparisons while interpreting illegitimate tasks (Strickhouser & Zell, 2015; Zell

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& Alicke, 2009), and we therefore expect effects of illegitimate tasks on both levels as well. Indeed, both intra-individual and inter-individual effects have been shown, although the majority of studies focused on inter-individual effects. We therefore postulate:

Hypothesis 2: Both on the within-person and the between-person level, illegitimate tasks are negatively related to enthusiasm (H2a) and contentment (H2b), and positively related to depression (H2c) and anxiety (H2d).

The Buffering Effect of Appreciation

The job demands-resources model postulates that resources may attenuate the negative impact of job demands (i.e. stressors) on strain and well-being (buffering effect: Bakker et al., 2007), implying that the relationship between stressors and well-being is weak(er) for those enjoying a high degree of job resources (Bakker et al., 2007). Many findings have confirmed such a buffering effect (Bakker et al., 2007; Jex & Bliese, 1999; Kottwitz et al., 2013). Regarding appreciation and illegitimate tasks, it is theoretically important that both contain a social message. Appreciation signals that one is valued and acknowledged; by contrast, illegitimate tasks signal a lack of respect for one's professional identity. The message sent by appreciation is rather direct, as appreciation is, for the most part, expressed directly in social interactions (Stocker et al., 2014). By contrast, the message sent by assigning illegitimate tasks is more indirect. It seems theoretically plausible that the impact of illegitimate tasks might be reduced if a supervisor directly signals appreciation. Thus, the processes postulated by JD-R theory for resources and stressors in general are likely to apply to the two specific variables we investigated. This reasoning is supported by a recent study that found an interaction between illegitimate tasks and appreciation in predicting turnover intentions on an inter-individual level (Apostel et al., 2017). As we expect the processes involved to operate in the same direction intra-individually and inter-individually, we expect the buffering effect to occur both on the between-person and the within-person level. We therefore postulate:

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Hypothesis 3: Both on the within-person and the between-person level, appreciation buffers the effect of illegitimate tasks on enthusiasm (H3a), contentment (H3b), depression (H3c) and anxiety (H3d), such that negative effects of illegitimate tasks are weaker when appreciation is high.

Buffering effects: Possible differences between levels. We argued above that rather public events/circumstances are not easily buffered on the inter-personal level because the events/circumstances to be considered are more limited. By contrast, in temporal comparisons, which are more "private" in nature, many more aspects may be taken into account. These theoretical considerations have implications for the buffering effect of illegitimate tasks on both levels.

We did not assess to what extent appreciation and illegitimate tasks reflected "private" or "public" events and circumstances in the sense discussed above. It seems plausible, however, that appreciation is more private and less public than illegitimate tasks. The reason is that appreciation can be shown in just about any situation – from (private) interactions with the supervisor to being praised in a meeting (public). It seems likely, therefore, that appreciation is composed of both private and public elements. Illegitimate tasks, on the contrary, involve carrying out activities that are likely to be noticed by colleagues (although they may be *assigned* "privately"), implying that they are likely to be largely pubic. Thus, appreciation entails a mixture of public and private elements, whereas illegitimate tasks entails mainly public elements.

Based on these considerations, we expect that appreciation is more likely to buffer the effects of illegitimate tasks in within-person than in between-person analyses. However, as our thinking about these issues was still somewhat vague when we started our study, and became more specific only later, we refrain from postulating a hypothesis about this effect but rather ask a research question.

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Research Question: Are buffering effects of appreciation more frequent on the within-person as compared to the between-person level?

Methods

Participants and Procedure

We contacted the HR-representatives of 20 organizations in Switzerland and sent them material about the study. Six of these organizations agreed to inform their employees about the study by passing on our material. These organizations comprised a hospital, a library, a telecommunication company, a production firm, and two government institutions. HR then sent us a list with e-mails of employees agreeing to participate. Data were collected over three waves with a time lag of two months between each wave. Employees could fill in questionnaires during working hours. Unfortunately, our procedure of concocting the sample does not allow us to calculate a participation rate, as most organizations did not contact employees directly but rather via supervisors, not all of which passed the information on to their employees. We therefore do not know the number of employees who received our information.

Altogether, 308 Swiss employees participated in the study from June 2013 to January 2014. A wide variety of jobs was represented in the sample: nurses, doctors, engineers, economists, administrators, quality specialists, assistants, financial specialists, prison guards, politicians, logistic experts, HR-specialists, account managers, and IT-specialists. The sample consisted of 161 (52.3%) female and 147 (47.7%) male participants. Mean age was 43.9 years ($SD = 10.4$; range 20 - 65). Participants had been working in the same company for an average of 10.7 years ($SD = 8.8$). On average, they were employed at 88% ($SD = 17.7$) of a full time equivalent. Of the original 308 participants, 253, or 82.1%, also participated at wave 2; and 216, or 70.1% at wave 3. At each wave, participants filled out the same questionnaire assessing conditions at work, including resources and stressors as well as affective well-being states.

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Drop-out analyses revealed only one difference between drop-outs (at any time) and those participating in all three waves, indicating that enthusiasm was somewhat lower for drop-outs at time point 3 ($p = .03$, $d = .26$).

Measures

Appreciation. *Appreciation* was measured with a scale composed of two subscales with 5 items each refering to appreciation from supervisors and from colleagues, respectively (Jacobshagen, Oehler, Stettler, Liechti, & Semmer, 2008). Responses referred to the extent to which each item applied to the participans' work situation over the past 2 months on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*very much*). Cronbach's alphas were between .90 and .92 for the supervisor-scale, between .86 and .91 for the colleagues-scale, and between .87 and .88 for the general scale for the three time points.

Illegitimate tasks. *Illegitimate tasks* were measured with the eight-item Bern Illegitimate Tasks Scale (BITS: Semmer et al., 2015). The introduction "Do you have work tasks to take care of, which …" is followed by statements like "…keep you wondering if they have to be done at all?" for unnecessary tasks, and "…you believe should be done by someone else?" for unreasonable tasks. Answers ranged from 1 (*never*) to 5 (*frequently*); internal consistency (Cronbach's alpha) ranged from .84 to .89 for unnecessary tasks, from .84 to .90 for unreasonable tasks, and from.88 to .91 for the total scale across the three time points.

Social support. Social support was measured using the German adaptation (Frese & Zapf, 1987) of the social support scales by Caplan, Cobb, French, van Harrison, and Pinneau (1975).

Well-being. *Well-being* was measured with Warr's (1990) instrument on job-related affective well-being. Participants indicated how often during the past two months their job made them feel each of twelve moods, such as "depressed", "miserable", "cheerful" and "enthusiastic". Three items each referred to enthusiasm (high arousal pleasant affect), contentment (low arousal pleasant affect), depression (low arousal unpleasant affect) and

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anxiety (high arousal unpleasant affect). Responses ranged from 1 (*never*) to 5 (*always*).

Cronbach's alpha for the four scales were between .73 and 88.

Analytical Procedure

Our data has a three-level structure with measurement waves (Level 1) nested within persons (Level 2), nested in companies (Level 3). To estimate intra-individual as well as inter-individual effects, we analyzed the data with a multilevel structural equation model, using Mplus version 7 (Muthén & Muthén, 1998 – 2015). As analyses yielded no significant differences between the organizations, we simplified the initial three-level model to a two-level model. On the within level, predictors were "latent group mean centered", correcting for sampling error (Muthén & Muthén, 1998-2015, p. 243). Significant coefficients on the within level reflect the effect of participants being high or low relative to their own mean for the respective predictor variable across the three waves. The reliability of the aggregated data was estimated by applying the Spearman-Brown formula (Lüdtke et al., 2008). Full information maximum likelihood procedures for two-level SEM were used to deal with missing data.

We first estimated a measurement model. For appreciation, appreciation by supervisors and appreciation by colleagues were used as indicators, applying the strategy of facet-specific parcels (Little, Rhemtulla, Gibson, & Schoemann, 2013). Similarly, unnecessary and unreasonable tasks were used as indicators for illegitimate tasks (Semmer et al., 2015). For affective well-being, we followed Warr et al. (2014) and used their four factors: enthusiasm, contentment, depression, anxiety as separate constructs.

Subsequently, we estimated two structural models. Model 1 included appreciation and illegitimate tasks as predictors of the four well-being variables as main effects; Model 2 also included the buffering effect of appreciation on well-being. As social support is conceptually close to appreciation and might be suspected to be actually responsible for the effects of appreciation, we controlled for social support. We saw no theoretical reason for age and gender, two frequently controlled variables (see Spector & Brannick, 2011). As readers might wonder

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if age and gender do have an effect, however, we also ran our analyses controlling for them. Results did not change, and we report them without age and gender.

Regarding power, our sample size is rather large at the between-level (N > 300) but rather small at the within-level (N =3), which is more important. "As a general rule of thumb, increasing the sample size at the highest level … will do more to increase power than increasing the number of individuals in the groups" (Scherbaum & Ferreter, 2009, p. 352).

Results

Measurement Model

A measurement model containing six constructs - appreciation, illegitimate tasks, and the four constructs of job-related affective well-being - across the three waves fitted well (χ^2/df = 1.79; RMSEA = .03; CFI = .99; SRMR$_{within}$ = .024; SRMR$_{between}$ = .021), and constraining the factor loadings to be equal over time did not significantly affect the model (χ^2/df = 1.83; RMSEA = .03; CFI = .99; SRMR$_{within}$ = .025; SRMR$_{between}$ = .024; $\chi2$ difference test, Satorra-Bentler scaling correction, p>.05).

Descriptive Results

Table 1 contains means, standard deviations, and correlations on the between and within levels for all variables used in the analyses. The null models revealed that 36% of the total variance resided between-person in anxiety, 47% in contentment, 61% in depression and 67% in enthusiasm, indicating that a considerable part of the variance can be explained by within-person variations (between 33% and 64%), thus necessitating a multilevel analysis (Hox, 1998).

Structural models. Table 2 shows the estimates of the associations between appreciation and illegitimate tasks with the four indicators of well-being, in term of main effects (Model 1, Figure 1) and interactions (Model 2, Figure 2).

Appreciation. Confirming our first hypothesis, appreciation was positively related with contentment (H1 a) and enthusiasm (H1 b), and negatively with depression (H1 c) and anxiety (H1 d) on the within-person as well as on the between-person level (Table 2, Model 1). Thus,

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participants reported higher levels of well-being for periods in which they experienced more appreciation as compared to periods in which they experienced less (within-person effect). In a parallel fashion, participants experiencing high appreciation, as compared to other participants, reported higher levels of well-being on the between-person level. Thus, all our hypotheses concerning main effects of appreciation were confirmed.

Illegitimate Tasks. Our hypothesis regarding main effects of illegitimate tasks was only partly confirmed. On the within-level, illegitimate tasks were not significantly related to any of the four components of well-being. With regard to the between-level, illegitimate tasks were significantly related in the expected direction with contentment (H2 b), depression (H2 c), and anxiety (H2 d), but not with enthusiasm (H2 a). Thus, Hypothesis 2 was not confirmed with regard to within-person effects, but largely supported with regard to person effects.

Interactions. The buffering effect that was postulated in Hypothesis 3 could be found on the within-person level for enthusiasm and contentment (H3 a, b), but not for depression and anxiety (H3 c, d). On the between-level, no buffering effect was found. These results disconfirm our hypothesis with regard to between-person effects, and partly confirm it for within-person effects.

Simple slope analyses for the two significant interactions between illegitimate tasks and appreciation, displayed in Figures 3 and 4, revealed the expected pattern. Illegitimate tasks were associated with enthusiasm (B = -.51, t = -3.98, $p < .001$) and contentment (B = -.31, t = -2.17, $p = .03$) only when appreciation was low, but not when appreciation was high (enthusiasm: B = -.03, t = -.09, *ns;* contentment: B = .03, t = .10, *ns).*

Regarding our research question, our results indicate a buffering effect of appreciation on the association between illegitimate tasks and well-being only on the within-person level, although only for two of the four well-being indicators. The fact that interactions occurred on the within-person level only, is in line with our conjecture that illegitimate tasks are not easily discounted in social comparisons, due to their public nature.

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Social support as a control variable. Social support was never significant in the within-person analyses but there were three significant coefficients in the between-person analyses; it never rendered the effect of appreciation nonsignificant. We also tested a model comprising the interactions between illegitimate tasks and social support (rather than between appreciation and social support), none of these interactions were significant, with regression weights as well as standard errors being close to |.01| in all four cases.

Discussion

The main goal of this study was to analyze the effect of appreciation and illegitimate tasks on affective well-being, as well as the moderating effect of appreciation, taking both the between-person and the within-person level into account. Main effects were confirmed for appreciation for all four indicators of well-being at both levels. Main effects for illegitimate tasks were confirmed for three of the four well-being variables at the between-level, and for none at the within-level. However, for two of the well-being variables there was an interaction on the within-level, in that illegitimate tasks predicted contentment and enthusiasm if appreciation was low. Therefore, these results present a mixed picture.

Main Effects and Buffering Effects at the Within and Between Person Level

Direct effects of appreciation. Our results confirm the direct effects of appreciation on all four affective well-being constructs (i.e. depression, enthusiasm, anxiety and contentment), on the within-person as well as on the between-person level. The more appreciation participants experienced, the higher the levels of affective well-being, both with regard to temporal (within-person) as well as social comparisons (between-person). Of the eight coefficients that were significant, two were qualified by an interaction; both were on the within-person level. We hypothesized that main effects of appreciation would occur on both levels, and our results confirmed this prediction.

These findings underscore the importance of appreciation for employee well-being, corresponding to its theoretically postulated importance for satisfying the need for a positive

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regard by important others (Leary, 1999, 2015). Appreciation responds to this need in a way that is especially clear and direct (Stocker et al., 2014). Our results are in line with the few studies investigating appreciation as a variable in its own right (e.g., Apostel et al., 2017; Bakker et al., 2007; Stocker et al., 2014). The positive effect of appreciation on affective well-being remained significant after controlling for social support, indicating that appreciation is indeed more than mere social support. The results therefore support the need for focusing specifically on appreciation, rather than treating it only as part of larger constructs (e.g., leadership, social support, organizational justice[1]).

Direct effects of illegitimate tasks. Regarding illegitimate tasks, we could only partly confirm our hypothesis. On the between-person level, illegitimate tasks were significantly related to three of the four aspects of affective well-being: contentment, depression, and anxiety. On the within-person level, there were two effects; both involved an interaction, and there was no main effect of illegitimate tasks that was not qualified by an interaction. That appreciation had a more pervasive effect than illegitimate tasks; is remarkable as, for once, good seems to be stronger than bad (see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). We attribute this strong effect to the fact that appreciation sends a clear and direct signal affirming the self, whereas this message is more indirect in the case of illegitimate tasks. Second, the results underscore that one cannot assume that the same mechanisms work at both levels, as appreciation can buffer the effects of illegitimate tasks on the within-person level only. This result pertains to our Research Question. We certainly have no full explanation for this pattern, but we feel that it may be important to consider the visibility of events involved in the two types of comparison, as outlined in the introduction.

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[1] Concepts such as leadership and organizational justice typically include aspects such as appreciation (or similar terms, such as respect, or acknowledgment), but they do not typically regard it as a core element. It should be noted, however, that there are exceptions. Thus, van Quaquebeke and Eckloff (2010) present an instrument referring to respectful leadership; Semmer et al. (2008) show that emotional support, which refers to acknowledgment and esteem, is a core element of instrumental support as well; and Bies (2015) argues that human dignity is a core element of interactional justice.

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The buffering effect of appreciation. Following Baumeister (1996), we suggested in the introduction that events/circumstances that are publicly visible are not easily discounted, especially in inter-personal comparisons, that is, social comparisons. Aspects that might counter such effects (i.e. resources) should refer to publicly visible events as well, which limits the number of events/circumstances that are likely to be considered. Building on this argument, we surmised that "public" events are not as easily countered (i.e. attenuated) as more private events would be.

By contrast, the standard for temporal comparisons is different, comparing current events or circumstances to earlier ones. In doing so, people may take many more events into account than in social comparisons, including many positive events that may attenuate the impact of a stressor. Many of these events may be private in the sense that they are only known to the person experiencing them. Therefore, the number of events that can buffer illegitimate tasks should be greater for temporal comparisons. Consequently, publicly visible events should have a greater chance to be buffered in within- as compared to between-people analyses.

Combining these considerations, we suggested the following: As illegitimate tasks entail more visibility, and as social comparisons make visibility especially salient, illegitimate tasks cannot be easily buffered on the between-person level. By contrast, visibility should not be so salient in temporal, intra-individual comparisons, and the number of items that could be taken into account is greater. As a result, buffering effects would be more likely to occur on the within-person level. Our results confirm our theoretical considerations in that buffering effects occurred at the within-person level only, but the confirmation is only partial, as only two of the four possible interactions were found. Furthermore, although we regard power as adequate overall, it may be somewhat low for interactions, which are typically harder to detect. Nevertheless, it is remarkable that only main effects of illegitimate tasks surfaced in between-person analyses, whereas interactive effects were found in within-person analyses only.

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Obviously, at this point our considerations are rather speculative and even to the point they are correct they certainly do not portray the whole picture. But they may be one part of the puzzle, and we do believe that they are worth being considered in further research and theorizing.

Theoretical Implications and Further Research

Appreciation. Theoretically, our results underscore the importance of appreciation. Effects of appreciation were pervasive; main effects occurred for all four well-being variables at both levels, and appreciation buffered the effect of illegitimate tasks for two well-being variables on the intra-individual level. We attribute these pervasive effects to appreciation responding to the need for a positive regard by important others (Leary, 1999, 2015) in an especially direct way. Appreciation not only deserves being studied as a variable in its own right in future studies; it also seems possible that some of the effects of constructs that include appreciation, such as social support can to some extent be explained by the appreciation component of these constructs (see Semmer et al., 2008). Future studies should therefore control for appreciation in order to determine its role among the components of constructs such as social support or interactional justice and should also investigate to what extent the facets of appreciation have a differential impact. Finally, research should investigate to which extent appreciation can buffer the effects of any stressor, or if such buffering effects are confined to stressors that also have strong implications for the self (e.g., failure experiences); the latter would correspond to the matching principle specified by de Jonge and Dormann (2006).

Illegitimate tasks. Although their effects were not as pervasive as those of appreciation, our results demonstrate the importance of illegitimate tasks. As the concept is rather new, it is important to demonstrate its usefulness, and the current study adds to a small but growing body of studies showing illegitimate tasks to predict a number of well-being indicators on an inter-individual (e.g., Omansky, et al., 2016; Schmitt et al., 2015; Semmer et al., 2015) as well as on an intra-individual level (e.g., Eatough et al., 2016; Kottwitz et al., 2013; Pereira et al., 2014;

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Sonnentag & Lischetzke, 2018). We, therefore, conclude that having to carry out tasks that employees consider not appropriate deserves attention in future research.

Similarly to appreciation, we see the main features of illegitimate tasks in their effect on one's (professional) self – boosting it in the case of appreciation, offending it in the case of illegitimate tasks (Semmer et al., 2015). However, in contrast to appreciation, which refers to rather clear and direct communications, illegitimate tasks convey a threat to self-esteem in a more indirect way. Their effects were particularly clear at the inter-individual level, and we attributed that to stronger effects under conditions of social comparison, which makes the issue of visibility especially salient. Effects on an intra-individual level were not absent, however; they were contingent on appreciation.

Between- vs. within-person effects. As discussed in the introduction, the majority of research on stress and resources at work has relied on inter-individual effects, yet the results have often been interpreted in intra-individual terms. Our study shows that between-person and within-person effects may sometimes converge (in our case: when dealing with appreciation) and sometimes not (in our case: illegitimate tasks). We argued that visibility may be an important aspect in these processes, in that highly visible events or circumstances are less easily discounted (and thus, buffered) than low-visibility events or circumstances, and we argued that such processes would favor main effects for inter-individual comparisons but buffering effects for intra-individual circumstances. Although these considerations are very tentative at this moment, they might help stipulate the development of theories concerning the likelihood of converging or diverging effects between and within individuals with regard to specific variables. Given that theoretical foundations for such predictions need more research, such developments would be highly desirable, and if our considerations help moving such attempts further, that would be a worthwhile contribution.

Practical Implications

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Three major practical implications can be drawn from the present findings. First supervisors should consider to what extent tasks they assign are legitimate. If assigning illegitimate task is unavoidable (after all, organizational necessities may demand it), supervisors should show respect by acknowledging that a task may be considered illegitimate by the employee and by explaining why they assign the task nevertheless ("I know this is not your job, but…"). Corresponding to interactional fairness (Bies, 2015; Tyler, 2012), such explanations may "legitimize" the task assignment and thus avoid, or at least alleviate, its potential negative impact as recently shown in a study by Minei, Eatough, & Cohen-Charash (2018). Second, supervisors (and others in the organization), should realize the importance of appreciating others and their achievements. The finding by Stocker et al. (2014) pointed out about 0.9 "appreciation-events" per day indicating that expressing appreciation may not be very common in many organizations. Note that this does not imply giving indiscriminate positive feedback or ignoring poor performance; nor does it imply excessively praising people even for the smallest achievement. Appreciation can be expressed in many different ways. Thus, although praise seems to be the most frequent way for expressing appreciation, many behaviors qualify as well, such as communicating that one enjoys working with that person, assigning interesting tasks after good achievements, expressing trust (Stocker et al, 2014), granting good conditions at work (e.g., job control: Semmer et al., 2006), giving fair feedback (Bies, 2015), or listening attentively and showing genuine interest (van Quaquebeke & Felps, 2016). Third, supervisors should be aware that there are two standards of comparison that are likely to be relevant. One is the comparison with other people ("when John did the same thing, she was much more enthusiastic than when I did it"), the other is the comparison with previous experiences ("he does not seem to acknowledge my performance as much as he used to"). Sometimes it may be advisable to state the standard one is applying in order to avoid misunderstandings. Thus, someone receiving praise for a performance that was not very good, but better than usually,

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may misinterpret this praise as indicating good performance in general. Subtle differences in behavior may make quite some difference in these matters (Semmer, et al., 2016).

Limitations and Strengths

As in any study, several limitations have to be acknowledged. First, all data in this study were collected by means of self-report, implying the possibility of common method variance (Podsakoff, MacKenzie, & Podsakoff, 2012; Spector, 2006). For future investigations of appreciation and illegitimate tasks, it would be useful to use additional sources of information (e.g., ratings by supervisors or other third parties). It should be noted, however, that statistical interactions, which are hard to find anyway (Aiken & West, 1991), are especially difficult to detect if common method variance is present (Siemsen, Roth, & Oliveira, 2010), which lends credibility to our results. Second, we did not collect further information pertaining to the organizations participants were working in. Future research should include such measures. Third, it is important to note that the study design does not allow conclusions concerning the causality of the effects, which may have been influenced by third variables not assessed in this study (Finkel, 1995). The main strength of our study is its focus on disentangling within-person and between-person effects and the combination of a stressor and a resource, both affecting the self.

Conclusions

By showing that within- and between-person effects may be similar for some predictors, but different for others, our study can contribute to distinguishing the two processes and avoiding premature generalizations from one level to the other. Our attempts at explaining these differences in terms of visibility also may contribute to the development of theories about when processes can be expected to be similar or diverge. Regarding our predictors, we confirm the importance of illegitimate tasks, which constitutes a rather recent, but promising, stressor construct; furthermore, we can demonstrate the pervasive importance of appreciation, which we feel should receive more attention and deserves to be studied as a variable in its own right.

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Table 1.

Means (M), standard deviations (SD) and correlations of the study variables.

Variable	M	SD within	SD between	1	2	3	4	5	6	7
1 Enthusiasm	2.72	.86	.85	-	.14**	-.08**	-.04*	.06**	-.07**	.02
2 Contentment	2.81	.88	.87	.68**	-	-.11**	-.24**	.07**	-.08**	.02
3 Depression	1.76	.78	.75	-.56**	-.50**	-	.12**	-.08**	.06**	-.02
4 Anxiety	2.26	.78	.70	-.36**	-.61**	.59**	-	-.04**	.05**	-.01
5 Appreciation	4.90	1.04	1.24	.45**	.34**	-.38**	-.17**	-	-.07**	.01
6 Illegitimate tasks	2.47	.70	.70	-.40**	-.40**	.47**	.41**	-.26**	-	-.01
7 Social support	3.58	.80	1.02	.01	.10**	-.01	-.17**	.10*	-.01	-

Note. Correlations below the diagonal reflect between-person associations of the level 2 variables (person; $N = 307$). Correlations above the diagonal reflect the within-person associations of the level-1 variables (measurement; $N = 763$). For the between-person association, level 1 data were averaged across all three occasions. ** = $p < .01$

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Table 2

Two-level structural equation models predicting four facets of affective well-being.

| | Enthusiasm | | | | Contentment | | | |
| | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
Measure	B	SE_B	B	SE_B	B	SE_B	B	SE_B
Intercept	3.08**	.15	1.23*	.56	2.78**	.13	1.32**	.47
Within-person effect								
Appreciation	.40**	.11	.38**	.11	.42**	.14	.46**	.10
Illegitimate tasks	-.19	.11	-.14	.22	-.23	.14	-.26	.21
Social support	.01	.04	.04	.04	.10	.08	.09	.07
Appreciation X Illegitimate tasks			.09*	.04			.13**	.04
Between person effect								
Appreciation	.84**	.17	.04	.03	.61**	.14	.02	.03
Illegitimate tasks	-.17	.12	-.08	.05	-.27*	.11	-.05	.06
Social support	.10*	.04	.01	.02	.01	.04	.01	.03
Appreciation X Illegitimate tasks			.01	.04			.01	.01

| | Depression | | | | Anxiety | | | |
| | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
Measure	B	SE_B	B	SE_B	B	SE_B	B	SE_B
Intercept	1.45**	.12	1.73*	.70	2.71**	.11	2.52**	.63
Within-person effect								
Appreciation	-.40*	.16	-.12	.15	-.25*	.11	-.25*	.12
Illegitimate tasks	.15	.15	.39	.32	.17	.12	.10	.23
Social support	-.03	.04	-.01	.04	-.03	.07	-.01	.06
Appreciation X Illegitimate tasks			-.01	.06			-.07	.04
Between person effect								
Appreciation	-.55**	.14	-.03	.02	-.29**	.10	-.04	.03
Illegitimate tasks	.35**	.10	.04	.07	.38**	.07	.14*	.06
Social support	-.09**	.03	-.01	.02	-.13**	.03	-.06*	.02
Appreciation X Illegitimate tasks			-.01	.01			-.01	.01

Note. Two-tailed testing, * = p < .05, ** = p < .01. B = unstandardized regression coefficient, SE_B = standard error.
Fit-indices Model 1: X^2/df = 1.92; RMSEA = .04; CFI = .98; $SRMR_{within}$ = .03; $SRMR_{between}$ = .04
Fit-indices Model 2: X^2/df = 2.28; RMSEA = .05; CFI = .95; $SRMR_{within}$ = .03; $SRMR_{between}$ = .04.
Sample size: N = 763 measures (level 1) of N = 307 participants (level 2).

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Within-level (N = 763):   Model 1
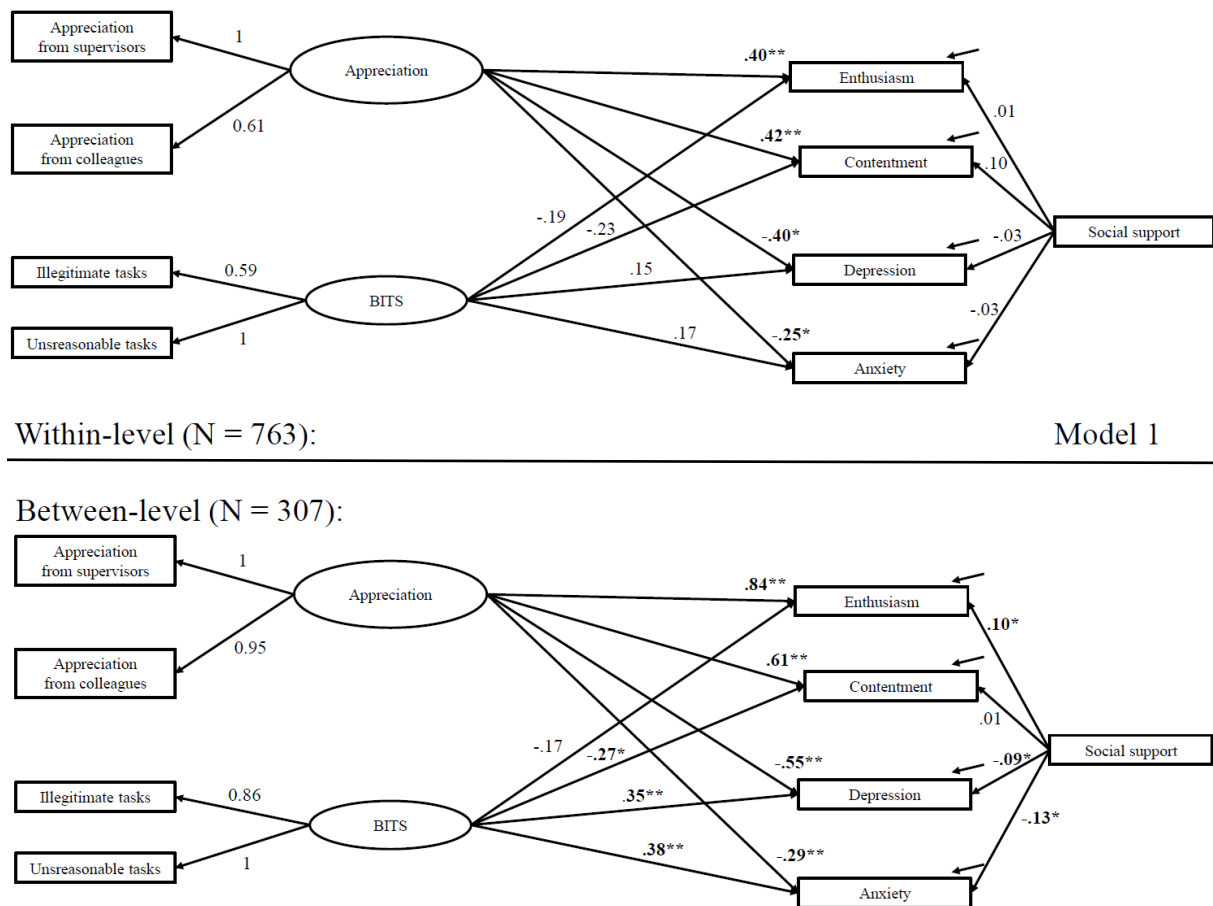
Between-level (N = 307):

Figure 1: Two-level latent structural equation model (Model 1).
Note: Boxes represent measured variables, whereas the circle is used to represent unobserved latent factors. Variable names are presented in plain font if they are not centered, in bold font if the variable is groupmean centered, and bold italic font if the variable is grand-mean centered. Two-tailed testing,* = p < .05, ** = p < .01. Unstandardized coefficients are presented. Model fit: X^2/df = 1.92; RMSEA = .04; CFI = .98; $SRMR_{within}$ = .03; $SRMR_{between}$ = .04.
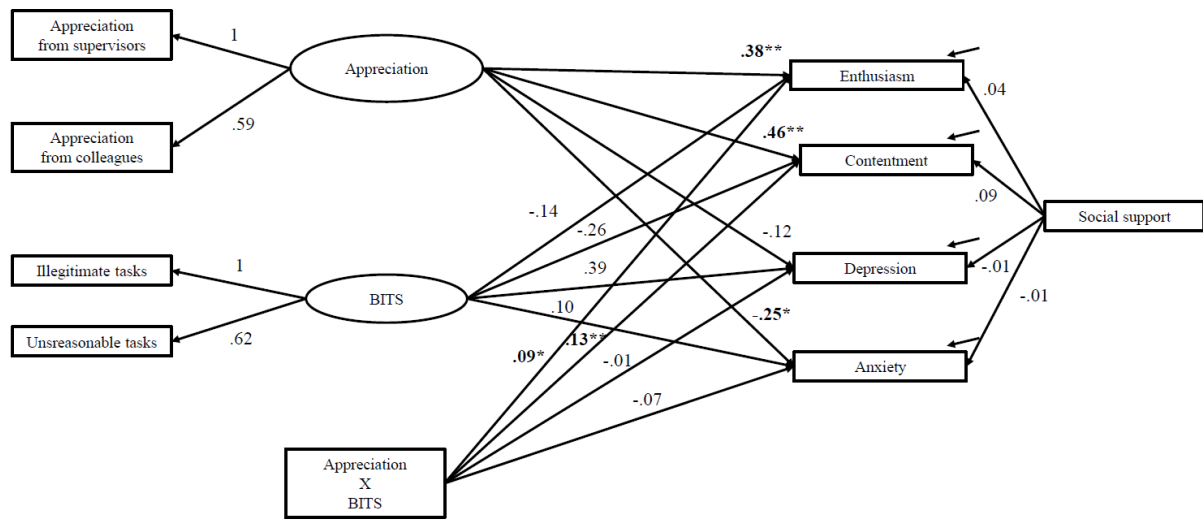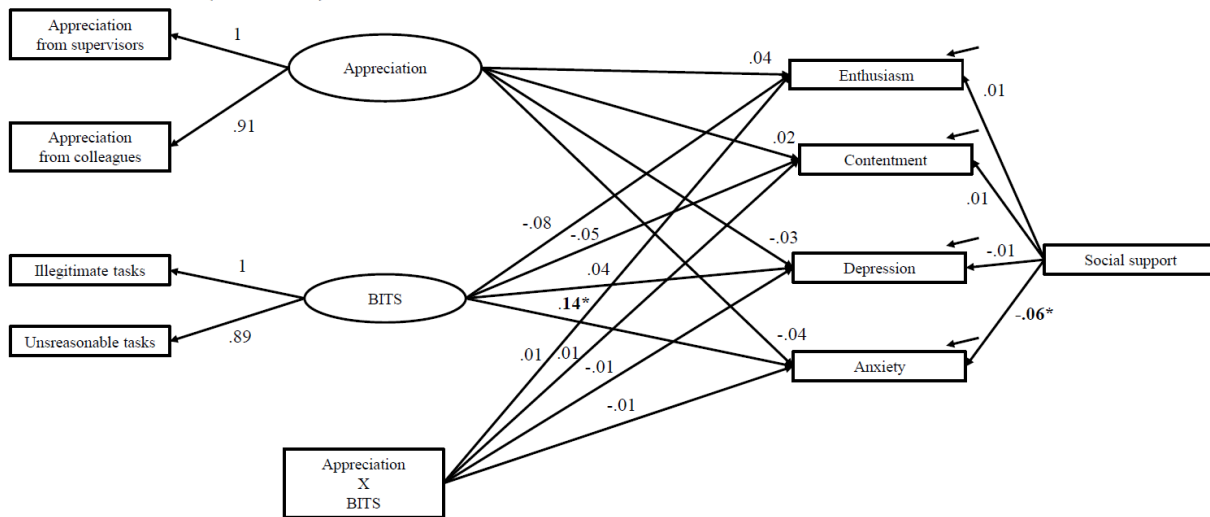
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Figure 2: Two-level latent structural equation model (Model 2).
Note: Boxes represent measured variables, whereas the circle is used to represent unobserved latent factors. Variable names are presented in plain font if they are not centered, in bold font if the variable is groupmean centered, and bold italic font if the variable is grand-mean centered. Two-tailed testing,* = p < .05, ** = p < .01. Unstandardized coefficients are presented. Model fit: X^2/df = 2.28; RMSEA = .05; CFI = .95; SRMR$_{within}$ = .03; SRMR$_{between}$ = .04.

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Figure 3. The association of illegitimate tasks and enthusiasm under conditions of low (-1SD) versus high (+1SD) appreciation on the intra-individual level. B_{low} = -.51, t = -3.98, *p* < .001; B_{high} = -.03, t = -.09, *ns*).
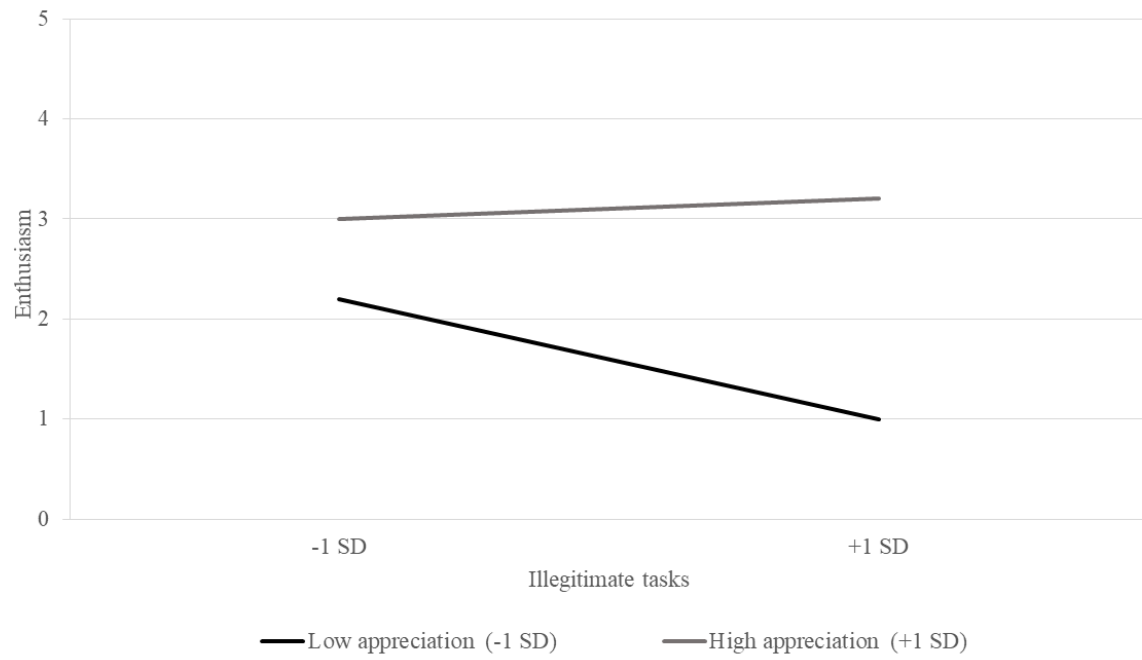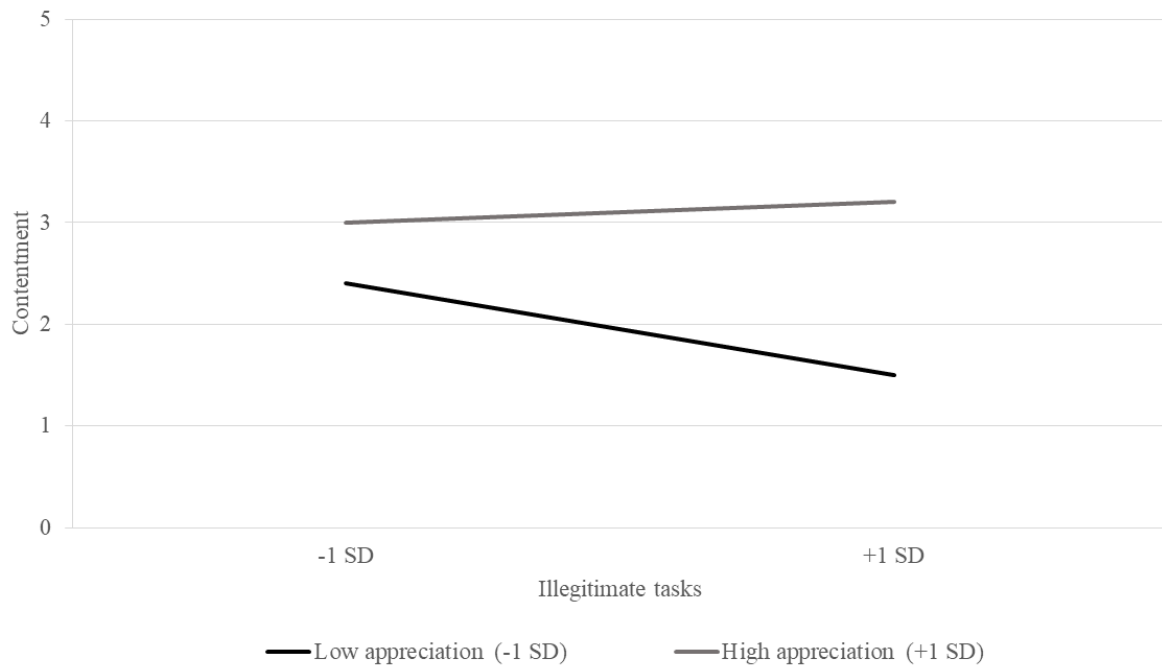
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Figure 4. The association of illegitimate tasks and contentment under conditions of low (-1SD) versus high (+1SD) appreciation on the intra-individual level; B_{low} = -.31, t = -2.17, *p* = .03; B_{high} = -.03, t = .10, *ns*).

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The buffering effects of appreciation on affective well-being after work, a diary study

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Abstract

The present diary study among 239 Swiss employees examined the buffering effect appreciation has on employees' daily affective well-being as well as how daily positive and negative events at work influence daily fluctuations of well-being after work. Given the importance of resources for employees' well-being in the context of work, we expected people to report higher levels of well-being after work on days where they experienced appreciation from supervisors (H1a) and from colleagues (H1b). We also argue that appreciation is more than a form of social support (H2) and we also expected people to report higher levels of well-being after work on days where they experienced more pleasurable events (H3). Furthermore, based on the findings from several previous studies, which found that resources are particularly important for well-being under adverse circumstances, we expected appreciation to be especially salient on days, where people also experience negative events (H4). Based on the buffering hypothesis within the job-demands-resource model (Bakker & Demerouti, 2007), we expected appreciation to influence well-being after work by moderating the relation between daily hassles and well-being after work protecting employees from potentially adverse effects of stressful events (H5). To test our hypotheses we performed a series of multilevel structural equation models. Appreciation from supervisors (but not from coworkers), predicted serenity over and above social support and pleasant events at work predicted affective well-being after work (serenity) in the expected direction. When faced with adversities that same day, appreciation from supervisors as well as from colleagues predicted serenity in the expected direction (over and above pleasurable events and social support). And last but not least, appreciation from supervisors (but not from colleagues) was found to moderate the relation between well-being after work and unpleasurable experiences that same day. Our findings have practical implications as well as implications for future research.

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The buffering effect of appreciation on affective well-being, a diary study

Continued exposure to certain job characteristics might be linked to precursors of more chronic problems such as high blood pressure, dysregulated stress hormones, or smoking and alcohol consumption (Repetti & Mittman, 2004). Studies on well-being suggest that an enhanced well-being is beneficiary not only for the employee but also for the organizations linking well-being to outcomes such as job performance, absenteeism, turnover and citizenship behavior (Bakker, 2011; Judge & Ilies, 2004; Ryan & Deci, 2001; Wright & Cropanzano, 2000; Wright, Cropanzano & Bonett, 2007). It is therefore important to better understand the underlying mechanisms and what can be done to improve employee well-being. Understanding predictors of short-term fluctuations in well-being may offer opportunities to intervene before the long-term consequence develop a chronic nature. In occupational stress research, the consequences of work are most clearly observed in the more immediate effects of work on well-being.

Our study aims at examining how daily perceived positive and negative experiences at work, with a special focus on appreciation, are associated with daily affective well-being after work. We used a diary study design to capture daily fluctuations in well-being after work and the daily experiences of employees.

Appreciation at work

Although appreciation is an important resource in everyday working life, it has not often been in the focus of research. The effort-reward model by Siegrist (1996) postulates that an imbalance between efforts invested and rewards received increases the risk of impaired well-being and ill health. Appreciation is seen as one of the reward factors (besides money, and job security or career opportunities). Empirical evidence indicates that appreciation may be the most important of these reward factors (van Vegchel, de Jonge, Bakker, & Schaufeli, 2002).

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Generally, appreciation is embedded in a social context and relates to the evaluation by others (Semmer & Jacobshagen, 2003). Appreciation is closely connected to self-esteem (Harter, 1993). A positive self-evaluation and a positive evaluation by others are strong motives for most people (Epstein, 1998; Sedikides & Strube, 1997). People strive to protect their self-esteem, which is closely connected to the regard or respect received from others (Leary & Baumeister, 2000). Given the importance for most people to preserve and enhance their self-esteem, it is plausible to expect that threats to self-esteem play a major role for experiences of stress. The "Stress-as- Offense-to-Self" concept (Semmer, Jacobshagen, Meier & Elfering, 2007) focuses on these threats to the self. Lack of appreciation constitutes such a threat. On the other hand, appreciation "boosts" self-esteem and is therefore regarded as an important cause of well- being and a powerful resource in the context of stress (Semmer et al., 2007). A cross-sectional study by Stocker, Jacobshagen, Semmer & Annen (2010) showed an association of appreciation with well-being indicators such as job satisfaction and reduced negative emotions, over and above other important resources (social support and interactional justice). Another cross-sectional study found that appreciation was positively related to work engagement (Bakker & Demerouti, 2007). In this study, Bakker and Demerouti (2007) analyzed the relation between several job resources and work engagement. Of the tested resources, appreciation seemed to be the strongest predictor for work engagement. A diary study by Stocker, Jacobshagen, Krings, Pfister, & Semmer (2014) found that appreciative leadership predicted employee well-being in terms of serenity after work. We distinguish between supervisors and colleagues as sources of appreciation and argue that appreciation is an important resource for employees and that it is more than a positive event at work and explains additional variance in affective well-being after work. We therefor formulated the following hypotheses:

Hypothesis 1a: On days where people experienced more appreciation from supervisors (as compared to days where they experienced less appreciation from supervisors), people reported

higher levels of well-being (serenity) after work, over and above positive events (within-person variation).

Hypothesis 1b: On days where people experienced more appreciation from colleagues (as compared to days where they experienced less appreciation from colleagues), people reported higher levels of well-being (serenity) after work, over and above positive events (within-person variation).

Appreciation and social support

As mentioned above, until recent years appreciation has not received much attention in research. It was mostly analyzed as part of larger concepts (e.g., social support). A first step to confirm the independent role of appreciation as a resource was made by Stocker and colleagues (2010). In a cross-sectional study, they were able to show that appreciation influenced job satisfaction and negative emotions over and above social support. These results showed that on a between-level, appreciation was indeed more than mere social support. With the current study we want to show that this is also true for the within-level (intra-individual level).

Social support is a psychological resource variable with mainly direct (and sometimes moderating) effects on strain (Cohen & Wills, 1985; Viswesvaran, Sanchez, & Fisher, 1999). Although the definitions of social support vary, it has been defined broadly as "the availability of helping relationships and the quality of these relationships" (Leavy, 1983, p. 5), including both tangible components like financial assistance and physical aid as well as intangible components like encouragement and guidance (Heitzmann & Kaplan, 1988). Social support gratifies an individual's basic social needs (e.g., approval, esteem, succor and belonging; Kaplan, Cassel, & Gore, 1977). Its positive effects on well-being have been demonstrated in numerous studies (Cohen & Wills, 1985; De Lange, Taris, Kompier, Houtman, & Bongers, 2003; Rhoades & Eisenberg, 2002, Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

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Although it can be argued that appreciation is a facet of social support, we think that they are two distinct constructs. Both satisfy the need to belong, but where social support is the perceived amount of support from others, appreciation is an evaluation by others and when given, boosts self-esteem which in turn is important for well-being (Semmer & Jacobshagen, 2003). To test wheatear appreciation is indeed more than social support in the context of employee well-being after work (serenity), we tested the following hypotheses:

Hypothesis 2a: On days where people experienced more appreciation from supervisors (as compared to days where they experienced less appreciation from supervisors), people reported higher levels of well-being (serenity) after work, over and above social support from supervisors.

Hypothesis 2b: On days where people experienced more appreciation from colleagues (as compared to days where they experienced less appreciation from colleagues), people reported higher levels of well-being (serenity) after work, over and above social support from colleagues.

Daily well-being and the importance of positive events at work

Employee well-being has been the focus of a great number of studies over the past couple of decades. Until recently the main focus in the study of employee well-being was to understand the differences between individuals (Bakker, 2015; Cropanzano & Dasborough, 2015; Ilies, Aw, & Pluut, 2015; Xanthopoulou, Bakker, Ilies, 2012). In recent years however, the focus has started to shift to the differences within individuals depending on different situations (Judge & Ilies, 2004; Nezlek, 2008; Xanthopoulou et al., 2012).

In everyday life it's often the accumulation of minor events that elicit an effect in the individuals' emotional reactions, not only major life events that happen only every so often (Almeida, 2005; DeLongis, Folkman, & Lazarus, 1988; Kanner, Coye, Schaefer, & Lazarus, 1981; Lu, 1994). What happens at work can drive changes in emotional states of employees

(Weiss & Beal, 2005). Affective events resulting from daily events and situations are thus an important part of everyday working life (Barsade, 2002; Fritz & Sonnentag, 2009). These events and situations are the proximal causes of affective reactions (Weiss & Cropanzano, 1996). Affective events are characterized by a change in circumstance or experience which can be appraised as either beneficial or detrimental for personal well-being and therefore lead to either positive or negative affective reactions (Weiss & Cropanzano, 1996). The emotional reactions can be conceptualized as short-lived reactions to events which are relevant to personal well-being (Fisher, 2010; Lazarus, 1991). Therefore, to understand the effect situations have on the momentary affect of people, a method which allows to detect small events must be applied. Diary studies allow to analyze what happens in everyday life and how people react to certain situations. It is an ideal method for tracking variable psychological phenomena over a number of occasions. In diary studies participants are asked to fill in short daily questionnaires allowing for experiences to be recorded as they are lived reducing biases due to a (sometimes much) later recall of the event (Harris, Daniels, & Briner, 2003).

Well-being may refer to many life domains. In the current study, we focus on the affective component of subjective well-being in the work context. Affective well-being refers to an individuals' reaction or emotional experience to events (Warr, 1990). Dictionary definitions of pleasurable feelings suggest two principal kinds: happiness as peace of mind and contentment or happiness as fun, excitement. This suggests a two dimensional view of affective well-being. Warr's (1990) two dimensional view of affective well-being makes a clear distinction between the dimensions of arousal and pleasure. Each emotion can be seen as a combination of these dimensions. While experiencing a pleasant emotion, the degree of arousal can vary considerably (Warr, 2007). Feeling calm and content implies a lower level of arousal compared to feeling excited or enthusiastic. The same is true for the experience of negative emotions where the emotions can range from feeling bored or depressed (low arousal) to feeling

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anxious or tense (high arousal). As we focus on everyday experiences, we expect serenity rather than high arousal as an indicator of well-being after work. Such serenity can be considered an element of detachment from work, which is important for preventing long-term consequences from short-term stressors (e.g., Geurts & Sonnentag, 2006).

Based on previous research which found a positive connection between the experience of pleasurable events and well-being (Diener, Lucas, & Oishi, 2009; Weiss, Nichols, & Daus, 1999), we formulated the following hypotheses:

Hypothesis 3: On days where people experienced more positive events (compared to days where they experienced less positive events), participants reported higher levels of well-being (serenity) after work (within-person variations).

Appreciation matters most in the face of adversities

Under stressful conditions it is more likely for individuals to fall back on resources as a coping mechanism or stress-reducing action (Bakker, Hakanen, Demerouti & Xanthopoulou, 2007). Several studies found that resources are particularly important for well-being under adverse circumstances. For example the study by Bakker and colleagues (2007) found that job resources particularly influence work engagement when job demands are high. A diary study by Gross, and colleagues (2011) found that positive events at work where negatively associated with fatigue only on days where people also reported experiencing many negative events. Based on these previous findings, we think that these processes also apply to appreciation. We therefore expect that appreciation is especially important on days, where people experience more negative events and postulate the following hypotheses:

Hypothesis 4a: The positive effect of appreciation from supervisors on well-being after work (serenity) is stronger on days where people also experience negative events at work (within-person variation).

Hypothesis 4b: The positive effect of appreciation from colleagues on well-being after work (serenity) is stronger on days where people also experience negative events at work (within individual variation).

The buffering effect of appreciation

In the study of employee well-being, several researchers found evidence for the stress-buffering effect of job resources on the relation between job demands and job strain (Bakker & Demerouti, 2007; Karasek & Theorell, 1990; Siegrist, 1996). The buffering hypothesis within the JD-R theory explains the combined role of job demands and job resources on employee well-being stating that costs associated with high job demands are lower for employees with high resources, which enable efficient coping (Bakker, Demerouti, & Euwema, 2005). We think that appreciation may influence well-being after work by moderating the relation between daily hassles and well-being after work protecting employees from potentially adverse effects of stressful events. Cross-sectional results have already provided some support for the potentially buffering function of appreciation on job satisfaction and turnover intention (Stocker, et al., 2010; Apostel, Syrek, & Antoni, 2017). Another cross-sectional study by Bakker and colleagues (2005) found that social support from colleagues and high-quality relationship with the supervisor buffered the impact of work overload on exhaustion (Bakker, et al., 2005). Although there are some findings indicating that appreciation could have a buffering effect between the negative impacts of stress on well-being indicators, to our knowledge there is no study on the day level analyzing the buffering effect of appreciation. We therefore formulated the following hypotheses:

Hypothesis 5a: Appreciation from supervisors buffers the impact of daily negative events on well-being after work in the sense that on days where people experience negative events and at the same day report receiving appreciation from supervisors, well-being (serenity) after work

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will be higher compared to days where they report experiencing no appreciation (within individual variation).

Hypothesis 5b: Appreciation from colleagues buffers the impact of daily negative events on well-being after work in the sense that on days where people experience negative events and at the same day report receiving appreciation from supervisors, well-being (serenity) after work will be higher compared to days where they report experiencing no appreciation (within individual variation).

Methods

Participants and procedure

For this study, we contacted the HR-representatives of 20 organizations in Switzerland and sent them informative material about the study. Of these 20 organizations, six agreed to inform employees about the study by passing on our material. HR then sent us a list with e-mails of employees agreeing to participate. The specific time for conducting the study was agreed upon with each organization. Employees could fill in our diary-questionnaire during working hours. Unfortunately, this procedure does not allow us to calculate a participation rate, as most organizations did not contact employees directly but rather via supervisors, not all of which passed the information on to their employees. We therefore do not know the number of employees who received our information.

Altogether, 239 Swiss employees from six different organizations (a hospital, two government institutions, a library, a telecommunication company and a production firm) participated in the study from June 2013 to January 2014. A wide variety of jobs was represented in the sample: nurses, doctors, engineers, economists, administrators, quality specialists, assistants, financial specialists, prison guards, politicians, logistic experts, HR-specialists, account managers, and IT-specialists. The diary study was part of a three-wave

longitudinal study, with a time lag of two months between the waves. At each wave, participants filled out diaries for three working days within a week. We thus collected event-related diaries for a total of nine working days within four months. We limited the study to three days mainly because data collection for the study was quite demanding and we were concerned that a larger number of diaries to be competed would have resulted in higher dropouts. Response rate at time 2 was 84.9%, or 203 participants, and 70.3% at time 3, or 168 participants.

The sample consisted of 119 (49.8%) female and 120 (50.2%) male participants. Participants were between 20 and 65 years of age, with a mean of 44.0 years ($SD = 10.4$); they had been working in the same company for an average of 10.6 years ($SD = 9.0$). On average, they were employed at 88.9% ($SD = 17.9$) of a full time equivalent.

Measures

Study variables

In this study we combined 2 types of questionnaires. During the period of the 9 working days via event sampling people could report positive as well as negative events they experienced during the day. Participants were instructed to complete the diary as soon as possible after the event occurred, so the emotional responses were still present. The number of events to report was not limited. If people did not experience a particularly positive or negative event they did not report anything. At the end of every working day participants additionally had to fill in a brief questionnaire assessing their momentary affective state after work. The questionnaires were filled out online. At the beginning of everyday people were reminded to fill out the daily questionnaires via an e-mail receiving at the same time the link to the questionnaires of that day. This allowed us to make sure people really reported what they had experienced that same day and not some days later after the feeling the experience left was possibly altered (Bolger, Davis, & Rafaeli, 2003).

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Affective well-being. Serenity was assessed through the brief questionnaire participants filled out after work assessing momentary well-being (serenity). The questionnaire consisted of 9 items and was based on an instrument by Apenburg (1986) asking respondents to describe how they are "feeling right now" using mood adjectives such as calm, relaxed, self-confident and recovered. For each adjective, respondents indicated whether they are feeling that state using a 6-point scale ranging from (1) *hardly* to (6) *completely*. Originally, the instrument contained subscales such as "self-confidence", "low tension" and "recovery". However, as in a previous study (Stocker, et al., 2014), an explorative factor analysis showed that out of the 13 original items, 9 mapped onto one underlying factor with factor loadings between.56 and .83. As in the study of Stocker and colleagues (2014) we used this single factor scale which can be described as serenity (9 items, internal consistency over the 9 days ranged from .89 to .91).

Pleasant and unpleasant events at work. Pleasant events at work were assessed through the events sampling tool adapted from the computer- assisted self-observation system COMES (Perrez & Reicherts, 1996). People were asked to report the occurrence of any event happening at work during the day that they considered as "pleasant" or "unpleasant". What people considered as pleasant or unpleasant was left to them, but we emphasized they should not only report major events, but also little things. When filling out a diary, participants briefly described the situation they experienced and answered several questions about the situation, making separate reports for pleasant vs. unpleasurable situations. When participants reported a pleasurable situation, they were asked if the situation entailed appreciation, and if yes, detailed questions about appreciation appeared.

The daily experiences of pleasurable events were aggregated on a day level to predict well-being at the end of work.

Appreciation. Appreciation was measured by asking participants if the positive situation they experienced involved receiving appreciation. If people responded positively to

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this question, specific questions regarding the source (supervisors or coworkers) and the effect of appreciation were asked.

Social support. Social support was measured by two items asking participants if they received any support from coworkers or supervisors.

Data analysis

In the current study we had a three-level structure with measurement waves (Level 1) nested within persons (Level 2), nested in companies (Level 3). To estimate intra-individual effects, we analyzed the data with a multilevel structural equation model containing three-levels. However, as analyses yielded no significant differences between the organizations, we simplified the model to a two-level model. Data were analyzed using the program MPlus (Muthén & Muthén, 1998 – 2015). For all models we used the full information maximum likelihood procedures for two-level SEM to cope with missing data.

Results

Descriptive results

Before testing our hypotheses, we calculated a null model to estimate the proportion of variance in the dependent variable that is accounted for at the day and person levels, respectively (Nezlek, 2001). The analysis revealed that 55% of the total variance in affective well-being (serenity) resided between units. Thus, even though the larger part of the variance is explained by between-person differences, there is still a considerable part of variation, which can be explained by within-person differences (45%).

During the nine days of this diary study, people had to fill in daily questionnaires. Participants were free to report any or no event (positive or negative), but they had to fill in the brief questionnaire after work. In total participants reported 1337 pleasurable events, of which 548 entailed appreciative situations. Whereas participants reported a total of 880 unpleasant

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events. Participants therefore reported a higher number of pleasurable events compared to unpleasant ones, which in itself is a nice finding. The pleasant events most often entailed a nice experience with a work colleague (being invited for lunch, getting help from someone for a task, a colleague which was sick is back, etc.) or supervisor (a positive feedback for a job well-done, receiving an interesting task, having the possibility of making some decisions concerning a specific task) or other situations not directly involving other people like an interesting workshop they could visit, a successful solution of a problem, and so on. Also often reported was a positive resolution of a difficult task or more in general that something in the organization of the work-task per se went well. With regards to appreciation, the person giving appreciation was most often a colleagues, followed by the supervisors. In a small percentage participants reported receiving appreciation from clients/patients or others. The most common form of showing appreciation was true praise and the most common reasons for appreciation were the person's own performance or the person itself.

Table 1 contains means, standard deviations, and correlations of the between and within level for all the variables used in the analyses.

(Table 1 about here)

Intra-individual analyses

To test our hypotheses, we run a sequence of five structural equation models, shown in Table 2.

(Table 2 about here)

Confirming H1a, appreciation from supervisors predicted well-being after work ($B = .13$, $p < .05$; Table 2, Model 1). In other words, on days where people experienced more appreciation

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from supervisors (as compared to days where they experienced less appreciation from supervisors), people reported higher levels of well-being after work. The same hypothesis for appreciation from work colleagues (H1b) cannot be confirmed. H2a could be confirmed: Appreciation from supervisors remained positively related to well-being after work, even when controlling for social support from supervisors ($B = .14$, $p < .05$; Table 2, Model 2). We can thus confirm that, on days where people experienced more appreciation from supervisors (as compared to days where they experienced less appreciation from supervisors), participants reported higher levels of well-being after work, over and above social support from supervisors. Again, the same hypothesis for coworkers cannot be confirmed (H2b). Confirming H3, positive events where positively related to daily affective well-being (serenity; $B = .11$, $p < .05$) on an intra-individual level (Table 2, Model 3). Thus, on days where participants experienced more positive events (compared to days where they experienced less positive events), participants reported higher levels of well-being after work (serenity). Furthermore, confirming H4a, the significant positive relation between appreciation from supervisors and well-being after work became stronger when people experienced unpleasurable events that same day ($B = .20$, $p < .01$; Table 2, Model 4). The same is true for appreciation from colleagues (H4b). The positive relation between appreciation from colleagues and well-being after work, not significant before, becomes significant when people experienced unpleasurable events that same day ($B = .11$, $p < .05$; Table 2, Model 4). Moreover, confirming H5a, we found a moderating effect of appreciation from supervisors between the relation of well-being after work and unpleasurable experiences that day ($B = .19$, $p < .01$; Table 2, Model 5; Figure 1). In other words, appreciation from supervisors buffered the negative impact of daily negative events on well-being after work in the sense that on days where participants experienced negative events (and the same day reported receiving appreciation from supervisors), well-being after work was higher compared to days where they did not experience appreciation from supervisors. Unfortunately, the same

effect could not be confirmed for appreciation from colleagues (H5b, $B = -.12$, $p > .05$; Table 2, Model 5). Thus, appreciation from colleagues did not work as a buffer for negative experiences that day. We also tested if social support from either supervisors or colleagues moderated the relation between negative events and well-being after work, but neither did (Table 2, Model 5).

(Figure 1 about here)

Discussion

The main goals of this paper were several. First, we wanted to show that appreciation has a beneficiary influence on well-being and that it is more than social support. Furthermore we wanted to test if the positive relation between appreciation and serenity after work still held, even when people experienced other pleasant events that day. We also wanted to test if the concept that resources are particularly important for well-being under adverse circumstances (Bakker et al., 2007; Gross et al., 2011), is also true for appreciation. And last but not least we wanted to test the buffering effect of appreciation on daily affective well-being.

Appreciation. Our hypothesis that appreciation is positively connected with well-being (serenity) can only be confirmed for one of the sources of appreciation: Only appreciation from supervisors had a significant relation to serenity, even though participants reported receiving less appreciation from supervisors and more from colleagues. However, it is not surprising that appreciation from supervisors carries more weight compared to appreciation from colleagues, as appreciation is an important component of good leadership (Stocker et al., 2014). If a supervisor praises an employee for a job well done or shows interest in their opinion, this might have a stronger impact on how this person feels compared to when the praise comes from a colleague doing a completely different job and who is not really able to judge if the job was indeed well done. A widely accepted view of the impact of life events was theorized already in

1964 by Helson with the adaptation level theory. From this perspective, the substantial change in life circumstances is temporary. People tend to react more strongly to changes compared to stable conditions, rendering them more sensitive to new conditions. Change, therefore, produces stronger reactions, but the circumstances that result from the change gradually cease to elicit a reaction and eventually become taken for granted (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Diener, Suh, Lucas & Smith, 1999).). It can be argued, that people usually have more contact with their work colleagues compared to their supervisors and therefore also have more opportunities of receiving appreciation from their colleagues which over time becomes a type of daily events which loses its meaning. Our data confirm, that people reported receiving more appreciation from their colleagues compared to supervisors. There is no research known to us analyzing the adaptation to resources. This might be an interesting topic for future research.

Appreciation and social support. The positive effect appreciation from supervisors has on serenity after work held after controlling for social support from the same source. This finding supports previous studies (Stocker et al., 2010) stating that appreciation is more than a form of social support and a construct in its own right. Again, this could not be confirmed for appreciation from colleagues.

Daily positive events and appreciation. Both daily positive events and appreciation have a beneficiary effect on how people feel after work. The more positive events people experience during the day, the more serene they feel about their work. The reported positive situations entailed pleasant experiences with other people as well as the situation per se (for example, finding a solution for a difficult problem). Appreciation is also a positive experience people can make at work, but we argued that it is more than a mere pleasant experience. Since appreciation is an acknowledgment of the person itself and boosts self-esteem, it can be expected that it has a stronger influence on well-being as a pleasant situation which remains just that. Our results

confirm this assumption, but only partly. Only appreciation from supervisors was significant over and above pleasant experiences during the day.

Daily negative events. There are not many studies analyzing this particular aspect of resources, but some researchers have postulated that resources are particularly important for well-being in the face of adversities. Bakker and colleagues (2007) think that particularly under stressful conditions it is more likely for individuals to fall back on resources as a coping mechanism or stress-reducing action. Another study by Gross and colleagues (2011) found that positive events at work had an effect on well-being only on days where people also reported experiencing many negative events.

We found that positive events and particularly appreciation (from supervisors) was positively related to well-being after work, not only on days where the participants also reported negative events, but the relation was stronger on those days. This positive effect of appreciation on well-being after work was significant for appreciation from supervisors as well as from colleagues. So it seems that appreciation from colleagues is not so important if all is well, but becomes an important resource on a bad day.

Appreciation as a buffer. Confirming previous results about the potentially buffering function of appreciation on job satisfaction and turnover intention (Stocker, et al., 2010; Apostel, Syrek, & Antoni, 2017), we also found that appreciation (but only from supervisors) worked as a buffer on the relationship between negative experiences at work and the daily level of affective well-being after work. One of the reasons why appreciation from supervisors (but not from colleagues!) works as a buffer may be given by the fact that supervisors appreciation puts demands in another perspective alleviating the negative influence of job demands on strain (Bakker et al., 2007).

Practical implications and future directions

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Our results suggest that employers can make a big contribution to their employees' well-being in a simple and even cheap way: appreciation from supervisors. Appreciation from supervisors buffers the negative impact daily unpleasurable events can have on the serenity of the employee after a day of work. Organizations can contribute to employees' well-being by installing a work climate which favors appreciation. Not only appreciation from supervisors, but also appreciation from colleagues is an important resources, but mainly on bad days.

In addition to the practical implications, this study leads to further questions for future research. The more pleasurable experiences people make at work, the better they feel after work. But it is also true, that the mere engaging in acts of kindness, e.g. giving people around us the experience of a pleasurable event at work, in turn also gives the person acting a higher feeling of well-being (Emmons & McCullough, 2003; Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011; Seligman, Steen, Park, & Peterson, 2005). So by engaging in this kind of behavior, it's not only the recipient which profits from the exchange. Future research could examine, if this is also true for people engaging in appreciation. Also, as mentioned above, to our knowledge as yet there is no research analyzing the adaptation to resources (appreciation). This could be examined in future studies.

Limitations

Besides considering the promising results of this study, a number of limitations have to be acknowledged. First, all data in this study were collected by means of self-report measures. This raises the possibility that the findings may have been influenced by common method variance (Spector, 1987). Secondly, it's important to note that, although we found an interaction effect, the effect size for interactions are usually small, particularly in nonexperimental studies (Frazier, Tix, & Barron, 2004). The implications of our finding, that appreciations buffers the negative relationship between negative experiences during the day and affective well-being

after work, are therefore limited. Nevertheless we think that our findings are an important step in the direction of creating more awareness for the importance appreciation can have for employees' well-being as well as for employers.

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Table 1. Means (M), standard deviations (SD) and correlations of the study variables.

Variable	M	SD	1	2	3	4	5	6	7
1 Serenity	3.77	.90	.	.07*	.06$^+$	.05	-.01	.06*	-.25**
2 Appreciation from supervisors	.11	.32	.07**	.	.26**	.05	.02	.14**	-.08*
3 Appreciation from colleagues	.17	.41	.08**	.29**	.	.04	.02	.19**	-.07*
4 Social support from supervisors	.12	.34	.15**	.05	.01	.	.38**	.09*	-.01
5. Social support from colleagues	.09	.24	.02	.02	.04	.40**	.	.01	-.04
6. Daily positive events	.47	.64	.01	.12**	.15**	.01	.01	.	-.14**
7 Daily negative events	.52	.65	-.25**	-.08**	-.10**	-.07**	-.02	-.29**	.

Note. Correlations below the diagonal reflect between-person associations of the level 2 variables (person; N ≤ 308). Correlations above the diagonal reflect the within-person associations of the level-1 variables (measurement; N ≤ 1357). For the between-person association, level 1 data were averaged across all nine occasions. * = p<0.05, ** = p<0.01.

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Table 2. Two-level models predicting **serenity at the end of work**.

Variable	Model 1 B	Model 1 SE$_B$	Model 2 B	Model 2 SE$_B$	Model 3 B	Model 3 SE$_B$	Model 4 B	Model 4 SE$_B$	Model 5 B	Model 5 SE$_B$
Within person effect										
Intercept	3.62**	.11	5.46**	.41	4.57**	.66	5.41**	.71	4.86**	1.57
Wave	.01	.01	.01	.01	.01	.01	-.01	.01	-.01	.01
Appreciation from supervisors	.13*	.06	.14*	.07	.16*	.07	.20**	.07	.07	.09
Appreciation from colleagues	.07	.05	.07	.05	.09	.05	.11*	.05	.18**	.06
Social support from supervisors			.08	.05	.09	.05	.10*	.05	.10*	.05
Social support from colleagues			-.04	.05	-.04	.05	-.03	.04	-.05	.04
Daily positive events					.11**	.03	.15**	.03	.16**	.04
Daily negative events							-.31**	.04	-.43	.22
Appreciation from supervisors X Daily negative events									.19**	.07
Appreciation from colleagues X Daily negative events									-.12	.07
Social support from supervisors X Daily negative events									-.01	.04
Social support from colleagues X Daily negative events									.03	.04

Note: Two-tailed testing, * = p<0.05, ** = p<0.01. B =unstandardized regression coefficient, SE$_B$=standard error.
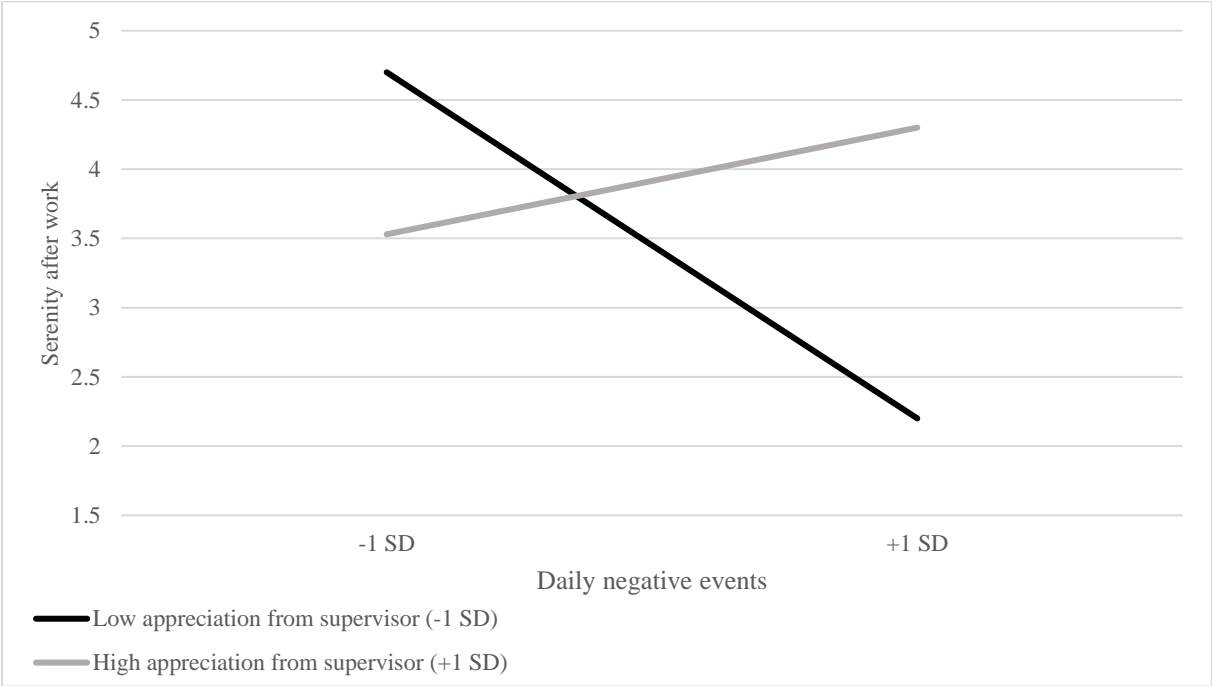Sample size: N≤1357 measures (level 1) of N≤308 participants (level 2).

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Figure 1. Interaction between daily negative events and daily appreciation from supervisors

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Linking appreciation and job satisfaction:
Subjective success and feelings of resentment as mediators

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Abstract

Purpose: This study investigates appreciation as a predictor of job satisfaction over time and aims at contributing to a better understanding of mediating mechanisms. We propose that subjective success and feelings of resentment towards one's organization mediate the prediction of job satisfaction by appreciation.

Design: Altogether, 193 employees from five Swiss organizations participated in a three-wave study with time intervals of two months. A double mediation was tested over a longitudinal study with three time-waves.

Findings: Results confirmed the double mediation of subjective success and feelings of resentment; no such mediation was found in a model testing reversed effects. Results highlight the importance of appreciation not only for job satisfaction, but also for affect related to the organization as a whole.

Practical implications: In practical terms, organizations and managers should recognize the role of appreciation for satisfaction with one's job, for affective reactions towards the organization as a whole, and for information about one's standing.

Originality/value: Appreciation is a promising resource in the context of employee well-being. As jet, not many researchers have focused on appreciation as a resource in its own right. This study is a first step in trying to understand, the mechanisms acting between appreciation and job satisfaction.

Keywords: appreciation; job satisfaction; affective reactions; mediation

Word count: 3921

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Linking appreciation and job satisfaction:
Subjective success and feelings of resentment as mediators

Who isn't happy when he or she hears his or her boss say "well done!"? Being appreciated for the work we do is an important resource in the context of work. Although few would doubt the importance of this resource in everyday working life, it has not often been in the focus of research. Rather, appreciation is part of larger concepts, such as social support, feedback, or justice (Semmer, Meier, & Beehr, 2016). We argue that appreciation is such a crucial aspect of working life that it should be investigated as a resource in its own right. At the same time, we want to go beyond providing evidence for appreciation as a predictor of a central occupational variable indicating occupational well-being, that is, job satisfaction (Warr, 2007); rather, we want to follow the call by Van Veldhoven et al. (2017) and help shed light on the mechanisms that connect resources at work with such outcomes. More specifically, we propose that appreciation fosters feelings of success and reduces resentment towards one's organization, and that these two variables mediate the prediction of job satisfaction by appreciation.

Appreciation as a resource in the context of work

Resources at work refer to organizational aspects that are functional in achieving work goals, may reduce job demands and their associated physiological and psychological costs, and stimulate personal growth, learning and development (Bakker & Demerouti, 2007). Appreciation is widely recognized as a resource, but rarely investigated in its own right. Rather, it typically is seen as a component of larger constructs, notably leadership (Van Quaquebeke, Zenker, & Eckloff, 2009; Yukl, 2013), feedback (Baron, 1988), social support (Semmer et al., 2008), or justice (Bies, 2015). In the well-known effort-reward model by Siegrist (e.g., 2002; Siegrist &Wahrendorf, 2016), appreciation is seen as one of the reward factor besides money and job security / career opportunities.

A positive self-evaluation and a positive evaluation by others are strong motives for most people (Epstein, 1998; Sedikides & Strube, 1997). Appreciation, which represents a

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positive evaluation by others, is important for the need to belong (Baumeister & Leary, 1995), or, in terms of self-determination theory (Deci & Ryan, 2008; Van den Broeck, Vansteenkiste, & De Witte, 2008), the need for relatedness but also – as appreciation often refers to good performance – the need for competence. Feeling (un) appreciated therefore is important for the self – in terms of threats to the self if one feels unappreciated, in terms of boost to the self if one feels appreciated. Importance for the self is the core element of the "Stress-as-Offense-to-Self" (SOS) theory (Semmer, Jacobshagen, Meier, & Elfering, 2007), and as appreciation represents a boost to the self, this theory argues for a more central role of appreciation as a resource in its own right rather than as a part of more general constructs. Appreciation itself has many facets; it often is expressed by praising employees and thanking them; but it may also be shown by expressing trust, by communicating that one enjoys cooperating with the focal person, by showing respect, by tangible rewards, but also by assigning interesting tasks and responsibilities (Stocker, Jacobshagen, Krings, Pfister, & Semmer, 2014).

Although studies focusing on appreciation are not very frequent, the studies that do exist show that appreciation is related to indicators of well-being. A cross-sectional study by Stocker, Jacobshagen, Semmer, and Annen (2010) showed an association of appreciation with well-being indicators such as job satisfaction and reduced negative emotions, over and above other important resources (social support and interactional justice). Another cross-sectional study found that appreciation was positively related to work engagement (Bakker & Demerouti, 2007). Of the several resources tested in this latter study, appreciation seemed to be the strongest predictor for work engagement. Elfering, Gerhardt, Grebner, and Müller (2017) found that appreciation predicted job satisfaction, controlling for supervisor social support. With regard to a longitudinal study involving four waves of measurement, Semmer, Jacobshagen, and Meier (2006) report cumulative effects of appreciation: job satisfaction increased continuously with the number of years characterized by high perceived appreciation. Finally, a

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diary study by Stocker et al. (2014) found that appreciative leadership predicted employee well-being in terms of serenity after work.

Based on SOS theory and the supportive empirical findings we argue that appreciation is an important resource that predicts job satisfaction over time. We, therefore, postulate:

Hypothesis 1: Perceived appreciation is positively related to job satisfaction over time.

Mediators: Subjective success and feelings of resentment

Mediators are variables "that explain how or why two things are related" (MacKinnon, 2008, p. 1). Mediation analysis therefore is a promising way to shed light on the mechanisms involved in the effects of resources on job satisfaction. There are many ways in which appreciation can influence job satisfaction. We focus on subjective success and on feelings of resentment for two reasons: Subjective success is a variable that can be considered central to the experience of work. Work is a goal-directed activity (Barrick, Mount, & Li, 2013; Zacher, Hacker, & Frese, 2016), and achieving goals, or making progress towards goals, is well-known to be associated with positive outcomes (Lawrence, Carver, & Scheier, 2002; Plemmons & Weiss, 2013). If an argument can be made for appreciation to foster experiences of success, such subjective success would be an obvious candidate for postulating mediation.

Whereas subjective success is mainly related to one's own work, feelings of resentment refer to the wider organization. Supervisors represent the organization, and to the extent they show appreciation, negative feelings towards this organization should be lower. Colleagues are an important part of one's organizational environment. To the extent they converge, appreciation by supervisors and colleagues is likely to reflect organizational culture. Therefore, if colleagues and supervisors convey appreciation, negative feelings towards the organization should be lower, making feelings of resentment a good candidate for mediation.

Subjective feelings of success

As already mentioned, success has often been shown to have positive effects, and job satisfaction has been a major indicator for these positive effects. Indeed, job satisfaction is a

major component of the well-known high-performance cycle (Latham, Locke, & Fassina, 2002; see also Plemmons & Weiss, 2013; Weiss & Cropanzano, 1996). Thus, if subjective success is postulated to mediate the effect of appreciation on job satisfaction, the second part of this mediation is well justified by theory and empirical findings. The first part needs more justification: Why should appreciation foster subjective success?

Success can be characterized as attainment of, or movement towards, a goal (Grebner, Elfering, & Semmer, 2010; Lawrence et al., 2002). The extent to which these criteria are met is subject to subjective evaluations by the focal person herself and his or her supervisors, which typically correlate rather modestly with one another (Heidemeier & Moser, 2009). In our context, and in line with the success resource model of job stress (Grebner et al., 2010), it is the subjective experience of success that is important. However, in many cases one cannot be very certain about one's achievements; many criteria are difficult to assess (e.g., the quality of a report), or are subject to comparisons (e.g., the number of contracts sold). Social cues may then be important to assess one's success. Appreciation by others may convey such social cues, signaling information about one's social standing and one's performance (see Bies, 2015). Appreciation may, therefore, create or enforce feelings of success, thus influencing the first path of the proposed mediation model.

Subjective success can refer to different goals. Grebner et al. (2010) distinguish task-related goals (e.g., finishing a task) and social goals (e.g., helping others; settling a conflict); these two types of goals correspond to the well-known distinction between task (or in-role) performance and contextual (or extra-role) performance (Sonnentag & Frese, 2002). Note that there is no requirement that these goals refer to big or long-term achievements that take years to obtain (Wiese & Freund, 2005; see the concept of personal strivings; Emmons, 1991). Rather, even small-scale achievements may foster momentary well-being (Mühlethaler, Pereira, Gross, Meier, & Semmer, 2012; Wong, Tschan, & Semmer, 2017), which may well translate into more general well-being if occurring on a regular basis (Mühlethaler, Jacobshagen, Kälin, Grebner,

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& Semmer, 2010). Nor does success require goals that are permanently represented consciously. Many goals, such as "performing well" may be "background goals" (Kruglanski et al., 2002) that are not set explicitly everyday yet are activated when an opportunity arises. Thus, goal attainment of any kind is likely to induce satisfaction, and appreciation is likely to support the subjective perception that one is doing well and thus feels being successful. We therefore postulate:

Hypothesis 2: Feelings of success will mediate the relationship between appreciation and later job satisfaction.

Feelings of resentment

Dictionary definitions of resentment state that resentment is a feeling of anger, displeasure and indignation due to a real or imagined injury or offence. Resentment suggests indignation and anger resulting from failure to receive rewards to which one feels to be entitled to, thus constituting a lack of perceived justice (Bies, 2015; Cohen-Charash & Spector, 2001; Hegtvedt, Clay-Warner, & Ferrigno, 2002). Appreciation is a well-established reward factor in the context of work (Siegrist, 1996, 2002; van Vegchel, de Jonge, Bakker, & Schaufeli, 2002). Therefore, we expect that the amount of appreciation received will (negatively) predict feelings of resentment.

A cross-sectional study by Stocker and colleagues (2010) found this negative association between appreciation and feelings of resentment.

Feelings of resentment represent one's relation to one's organization and one's work in general, and therefore are likely to be associated with low satisfaction. Such an association has, indeed, been found by Hegtvedt et al. (2002).

Following this line of reasoning, we expect resentment to act as a mediator between appreciation and job satisfaction.

Hypothesis 3: Feelings of resentment will mediate the relationship between appreciation and later job satisfaction.

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Figure 1 shows the proposed model.

[Figure 1 about here]

Methods

Participants and procedure

For this study, we contacted the HR-representatives of 20 organizations in Switzerland and sent them informative material about the study. Of these 20 organizations, six agreed to inform employees about the study by passing on our material. HR then sent us a list with e-mails of employees who agreed to participate. The specific time for conducting the study was agreed upon with each organization. Employees could fill in our questionnaire during working hours. Unfortunately, this procedure does not allow us to calculate a participation rate, as most organizations did not contact employees directly but rather via supervisors, not all of which passed the information on to their employees. We therefore do not know the number of employees who received our information.

Altogether, 193 Swiss employees from six different organizations (a hospital, two government institutions, a library, a telecommunication company, and a production firm) participated in this 3-wave study from June 2013 to January 2014. A wide variety of jobs was represented in the sample: nurses, doctors, engineers, economists, administrators, quality specialists, assistants, financial specialists, prison guards, politicians, logistic experts, HR-specialists, account managers, and IT-specialists. Of the 308 who participated at time 1, 253 (82.1%) also participated at wave 2, and 216 (70.1%) at wave 3. The sample consisted of 103 (53.4%) female and 90 (46.6%) male participants. Mean age was 45.1 years ($SD = 10.3$; range 21 - 65). Participants had been working in the same company for an average of 10.7 years ($SD = 8.8$). On average, they were employed at 88% ($SD = 17.7$) of a full time equivalent. Those

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who did not participate at all three waves did not differ from those who did with regard to the

variables analyzed in this study, the only exception being age: People who did not participate

in all three waves were younger than people who did [41.18 years (SD = 10.10) compared to

45.19 years (SD = 10.33), p = .002].

At each wave, participants filled out the same questionnaire assessing conditions at

work, including different resources and stressors as well as job satisfaction.

Measures

Job satisfaction. Job satisfaction was assessed with a 3-item scale (Baillod & Semmer,

1994). Example items are "Hopefully my work situation will stay as good as it is now" or "After

a work-free period, I'm always looking forward to going back to work". Answers ranged from

1 (*not at all*) to 7 (*very much*); internal consistency was α = .80.

Appreciation. Appreciation was measured with a 10 item scale (Jacobshagen, Oehler,

Stettler, Liechti, & Semmer, 2008). Five items each assess appreciation from supervisors and

from colleagues, respectively. Example items are: "My supervisors praise me when I carry out

my tasks well", "My colleagues show how much they value my opinion by asking for my

advice". Participants were asked to indicate the extent to which the statements applied to their

work situation on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*); Cronbach's alpha

= .86.

Subjective success at work. Subjective success at work was measured in terms of task-

related goal attainment (3 items) and in terms of prosocial success (6 items) with the respective

subscales of the subjective occupational success scale by Grebner et al. (2010). Example items

are: "I achieved good results", "I completed my tasks" for task-related goal attainment, and "I

motivated others", "I helped others to succeed" for prosocial success. Answers ranged from 1

(*never*) to 7 (*all the time*); internal consistency was α = .87.

Feelings of resentment. Feelings of resentment were assessed with the 7-item scale by

Geurts, Schaufeli, and Rutte (1999), which asks to what extent one has feelings such as anger,

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indignation or disappointment towards one's organization. The response format ranged from 1 (*not at all*) to 7 (*very much*); internal consistency was α = .94

Data analysis

Using the PROCESS macro for SPSS (Hayes, 2013), Model 4, we tested statistical mediation using bootstrap methodology to evaluate the significance of the indirect effect (Hayes & Scharkow, 2013). Alpha level was 5% and tests were two-tailed. Since this method applies a list-wise deletion, the final sample is composed only of those individuals who participated in all three surveys ($N = 193$).

In our model appreciation was assessed at t1, the two mediator variables (subjective success and feelings of resentment) were assessed two months later (t2), job satisfaction was assessed at t3, and thus four months after appreciation and two months after the mediator variables. We controlled for the baseline values job satisfaction, subjective success, and feelings of resentment.

Results

Descriptive results

Table 1 shows mean values, standard deviations, and inter-correlations of the scales. As expected, all the study variables are positively related to job satisfaction at time 3.

[Table 1 about here]

Mediation model

The model estimates are provided in Figure 2. Without mediators, appreciation was positively related to job satisfaction 4 months later, controlling for initial values of job satisfaction (path c); thus, Hypothesis 1 is confirmed. Adding the proposed mediators rendered the direct effect of appreciation (path c') nonsignificant; appreciation was positively related to the mediators two months later, and the mediators, in turn, predicted job satisfaction at t3; all

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coefficients are in the expected direction; baseline values of subjective success and feelings of resentment are controlled. Thus, confirming our hypotheses, subjective success (H2) and feelings of resentment (H3) mediated the relationship between appreciation and job satisfaction four months later.

[Figure 2 about here]

Inverse model test

Our hypotheses referred to an effect of appreciation on job satisfaction and the mediating role of subjective success and feelings of resentment. However, it is possible that job satisfaction also leads to appreciation, mediated by subjective success and feelings of resentment. In this inverse model, the direct effect from job satisfaction to appreciation was positive and significant, but none of the indirect paths was significant, nor was the total indirect effect. Thus, subjective success and feelings of resentment cannot be considered mediators in this inverse model; however, job satisfaction predicts appreciation four months later, controlling for appreciation at baseline. Details regarding this model can be obtained from the first author.

Discussion

The main goal of this study was to test a proposed mediation between appreciation as a resource and its positive effect on job satisfaction over time. Confirming the mediating role of subjective success and feelings of resentment is the study's main contribution.

The direct effect of appreciation on later job satisfaction could be expected on theoretical grounds and on the basis of prior research on appreciation. Nevertheless, this result has an important implication in that it suggests studying appreciation as a resource in its own right, rather than only treating it as part of larger constructs. The boost to the self-implied by

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appreciation, as postulated by SOS theory (Semmer et al., 2007), does seem to render appreciation a predictor the importance of which should not be underestimated.

However, the main contribution refers to the double mediation that was postulated, and confirmed, in this study. Representing the high arousal-low pleasure quadrant within the well-known emotional circumplex (Warr's, 2007, second axis), feelings of resentment are an affective variable related to one's organization as a whole. That appreciation predicts feelings of resentment over time implies that the effects of appreciation are not confined to the people in one's immediate surroundings who behave in an appreciative way; rather, the effects are more general and affect the wider organization. Feelings of resentment, in turn, predict job satisfaction over time.

Although it may evoke feelings of pride and enthusiasm (Stocker et al., 2014), which represent the high arousal-high pleasure quadrant in the emotional cirumplex (Warr's, 2007, third axis), subjective success itself cannot be described in terms of the emotional circumplex; rather, it represents Warr's (2007) dimension of self-validation, which he considers to be another facet of happiness. It is not surprising, therefore, that subjective success predicts job satisfaction. It may, however, appear less obvious theoretically that appreciation predicts subjective success. Rather, as appreciation often refers to performance (Stocker et al., 2014), one might expect success to predict appreciation rather than the other way around. Subjective success t2 does, indeed, correlate with appreciation t3 (see Table 1); however, in our reversed model, only job satisfaction remains a predictor of appreciation, whereas subjective success does not.

The prediction of subjective success by appreciation indicates that the subjective evaluation of one's performance is not independent of the social context. Rather, people seem to validate their own judgments by perceived judgments by others at least to some degree (Fazio, 1979; Festinger, 1954). From that perspective, appreciation is more akin to a perceived *indicator* of success that induces, or reinforces, one's subjective evaluation of success. In

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addition, however, appreciation may well foster "objective" success by fostering motivation and inducing enthusiasm and engagement. These two explanations are, however, by no means contradictory and might well occur together.

Our test of the reverse model revealed that job satisfaction t1 predicted appreciation t3, indicating a reciprocal process between these two variables; they seem to reinforce each other over time, possibly leading to an upward spiral (Salanova, Bakker, & Llorens, 2006). However, the mediation processes are confined to the path from appreciation to later job satisfaction.

Strengths and Limitations

The main strength of our study is that we tested a mediation model across three points in time and could show that appreciation at time 1 predicted subjective success and feelings of resentment at time 2, and that these two mediators, in turn, predicted job satisfaction at time 3. The initial values of job satisfaction and those of the mediators were controlled.

Regarding limitations, no strong causal inferences can be drawn despite the longitudinal design, as the effects could, at least partly, be due to third variables. Furthermore, all data were collected by way of self-report, raising the possibility that the findings may have been influenced by common method variance (Podsakoff, MacKenzie, & Podsakoff, 2012). However, the initial values of job satisfaction, subjective success and feelings of resentment were controlled, which makes it unlikely that common method variance could have seriously distorted our results. Finally, the sample represents a limitation of our study. Due to the procedure of asking organizations rather than individuals, we could not determine the response rate. Furthermore, the meaning and importance of appreciation may be different in different cultures; it is therefore unclear to what extent our results can be generalized. It should be mentioned, however, that effects of appreciation (and similar constructs such as (dis)respect) have been found in a number of different countries (e.g., Bakker & Demerouti, 2007; van Vegchel et al., 2002; see also Bies, 2015; Miller, 2001). Nevertheless, the specific mediating

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mechanisms may not be the same everywhere, requiring further research on an international level.

Practical implications and future directions

From a practical point of view, our results underscore the importance of appreciation. Considering that Stocker et al. (2014) found 0.9 episodes of appreciation per day, it seems both helpful and possible to recommend that more appreciation be conveyed in everyday working life. Although supervisors have a special responsibility in this respect, appreciation from colleagues is important as well, arguing for a wider concept of an appreciative organizational culture. Although praise is one of the most reported forms of appreciation empirically (Stocker et al., 2014), appreciation can be given in many different ways. To appreciate also means to show interest in someone's work, to take problems seriously, to ask someone for advice. To assign interesting tasks to someone also signals appreciation and esteem, and so does granting high autonomy. Many of the behaviors signaling appreciation (or lack of it) seem to be rather subtle. Therefore, the power of small gestures such as nodding during a conversation, giving timely feedback on a finished task or giving an explanation if the feedback cannot be given in a short time frame, should not be underestimated (see Krings, Jacobshagen, Elfering, & Semmer, 2015).

Supervisors and organizations should realize that appreciation has a number of effects. It contributes to employee well-being, for instance in terms of serenity at work (Stocker et al., 2014) or in terms of job satisfaction, as in our study. However, it also contributes to a better relationship of employees to their employer, which manifests itself in lower feelings of resentment towards one' organization. Beyond these effects, however, appreciation conveys important signals to employees about their performance and their standing in the organization, thus potentially reducing role ambiguity, which is a typical hindrance stressor (Webster, Beehr, & Christiansen, 2010).

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In terms of research, it is obvious that our results require replication. They suggest, however, that research should focus more than is usually done on appreciation as a construct in its own right. Regarding mediators, it seems possible, that the mediators we tested are not the only ones. Pride, enthusiasm, increased engagement and motivation, are but a few of the variables that come to mind. Indeed, there may be "chains" of mediators, for instance in that appreciation fosters subjective success, which fosters pride, which in turn fosters engagement (for an example of such a mediation model see Elfering, Igic, Keller, Meier, & Semmer, 2016). Furthermore, mediators do not have to be the same for all employees; variables such as conscientiousness, (stability of) self-esteem, or agreeableness might moderate these associations.

To conclude, the current study confirmed the important role of appreciation for job satisfaction, and it revealed a mediation of this association through feelings of resentment towards one's organization and through subjective feelings of success. Although this study is concerned with only one (although an important) resource -appreciation - and constitutes only one step in the complex mosaic that is likely to finally emerge, we hope it helps to shed light on the mechanisms that are operating when considering the effects of resources, in this case, appreciation in working life.

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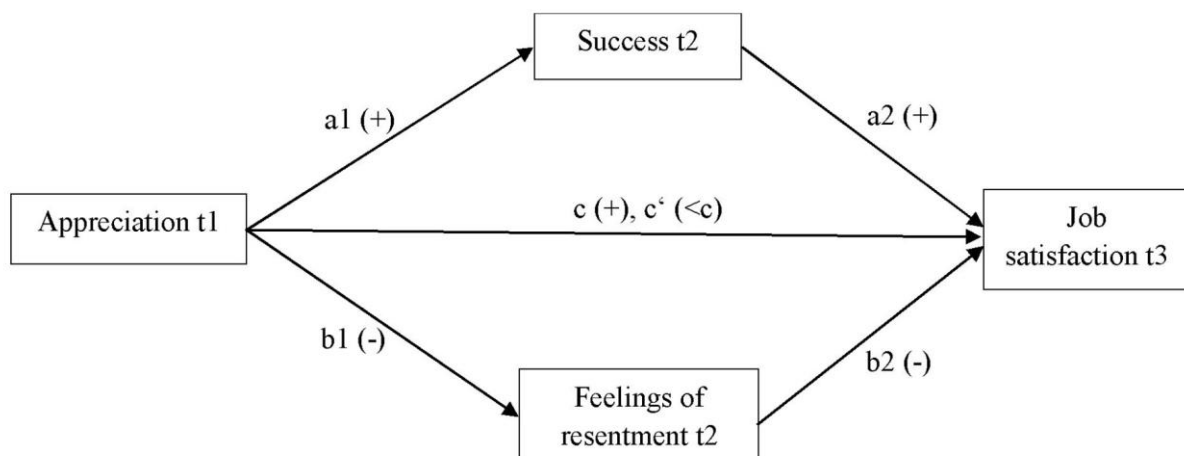
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Table 1

Means, standard deviation, and intercorrelations

	M	SD	1	2	3	4	5	6
1. Appreciation t1	5.22	.94	-					
2. Success t1	4.96	.82	.23**	-				
3. Success t2	4.84	.84	.29**	.72**	-			
4. Feelings of resentment t1	2.84	1.34	-.46**	.02	.01	-		
5. Feelings of resentment t2	2.80	1.39	-.39**	.09	.06	.74**	-	
6. Job satisfaction t1	4.65	1.32	.51**	.09	.11	-.64**	-.58**	-
7. Job satisfaction t3	4.54	1.34	.46**	.21**	.21**	-.48**	-.51**	.72**

Note. Pearson correlation coefficients. $N \geq 193$. ** $p < .01$ (two-tailed).

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Figure 1. The proposed model
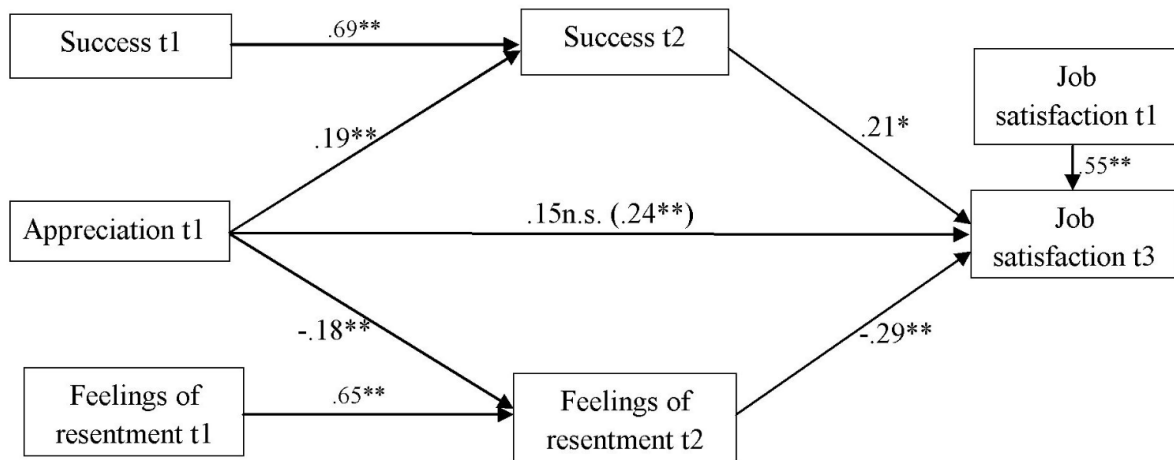
Total effect: .24 CI [.07, .41]
Direct effect: .15 CI [-.02, .32];Total indirect effect: .09 CI [.03, .18]
Specific indirect via success: .04 CI [.01, .10]; Specific indirect via resentment: .05 CI [.005, .13]

Figure 2. The research model with unstandardized path coefficients

Notes. (N = 193); * p < .05, ** p < .01 (two-tailed). Bootstrap sample size = 10'000