

## Invited Article

## Employee commitment and well-being: A critical review, theoretical framework and research agenda

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## ABSTRACT

Although a great deal is known about the implications of employee commitment for organizations, less attention has been paid to its ramifications for employees themselves. Previous research has been unsystematic and the findings have sometimes been inconsistent. The most consistent findings pertain to the positive links between affective commitment and employee well-being. Relations between continuance commitment and well-being are more variable, but generally negative. Little is known about relations involving normative commitment. There is considerable inconsistency in findings pertaining to the moderating effects of commitment on stressor–strain relations. We provide a theoretical framework based on an integration of the three-component model of commitment (Meyer & Allen, 1997) and Deci and Ryan's (1985) self-determination theory of motivation to help explain both the consistencies and inconsistencies, and to guide future research. We also argue for a broadening of the concept of employee well-being to include indices of eudaimonic as well as hedonic well-being.

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There is now a substantial body of evidence demonstrating the benefits to organizations of having a strongly committed workforce. Indeed, meta-analytic reviews of this research demonstrate that employees who are committed to an organization are less likely to leave (Mathieu & Zajac, 1990; Tett & Meyer, 1993) and more likely to attend regularly (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002), perform effectively (Cooper-Hakim & Viswesvaran, 2005; Riketta, 2002), and be good organizational citizens (Meyer et al., 2002; Riketta, 2002). Commitments to other work-relevant foci, such as occupations (e.g., Meyer, Allen, & Smith, 1993), supervisors (e.g., Stinglhamber & Vandenberghe, 2003), work teams (e.g., Becker & Kernan, 2003), and customers (e.g., Siders, George, & Dharwadkar, 2001), have also been linked to retention and other indices of effective performance of benefit to employers. One caveat, however, is that some forms of commitment are more beneficial than others. Commitments reflecting an affective attachment and involvement with the target have been shown to have greater benefit for that target than those based on concerns over social or economic costs (Cooper-Hakim & Viswesvaran, 2005; Meyer et al., 2002).

Far less attention has been given to the implications of commitment for employees themselves. Do employees benefit from having strong commitments at work, or do these commitments add to the stresses and strains that appear to be ubiquitous in the modern workplace? Do the implications of commitment for employees depend on the nature of the commitment as they do for organizations? What are the mechanisms by which commitment exerts its influence and what can organizations do to optimize their own and employee outcomes? Our objective is to address these important questions. We begin by identifying what we mean by commitment and well-being, and then review a diverse body of research to discover what we know about their connection. Based on this review, we develop a theoretical model to help explain both consistencies and inconsistencies in the research findings, and offer a set of propositions to guide future research. We also provide recommendations for ways to address some of the limitations in existing research. We conclude with a discussion of how our model can help to guide the development of policies and practices designed to foster commitments of benefit to both employers and employees.

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## Meaning of commitment and well-being

Before discussing its implications for employees, it is important to clarify what we mean by commitment and to identify its different forms and foci. Over the years, commitment has been conceptualized in various ways (for reviews, see Klein, Molloy, & Cooper, 2009; Meyer & Allen, 1997). For present purposes, we adapt the approach taken in the well-established three-component model (TCM: Meyer and Allen, 1991, 1997; Meyer & Herscovitch, 2001) and view commitment as “a force that binds an individual to a target (social or non-social) and to a course of action of relevance to that target” (Meyer, Becker, & Van Dick, 2006, p. 666). This binding force can be experienced in different ways (i.e., can be accompanied by different mindsets), including: an affective attachment and involvement with the target, a felt obligation to the target, and an awareness of the costs associated with discontinuing involvement with the target. In their pure forms, these mindsets are referred to as affective (AC), normative (NC), and continuance (CC) commitment, respectively.

Another important development in commitment research has been the increase in attention given to other workplace commitments (cf. Becker, 1992; Meyer & Herscovitch, 2001), including commitments to other organizations (e.g., professions and unions; see Vandenberghe, 2009), people (e.g., supervisors and teams; see Becker, 2009), and actions (e.g., goals and programs; see Neubert & Wu, 2009). These commitments have all been found to have outcomes of relevance to the target and, in many cases, to the organization as a whole. Only a few studies have addressed the implications of these other commitments for employee well-being, but these are included in our review where relevant.

The meaning of employee well-being is arguably even more complex than the meaning of commitment. Varying definitions and models of well-being have been proposed over the years and a detailed discussion of this issue goes beyond our current objectives (see Larson, 1999, and Tetrick, 2002, for more information). However, we agree with the general sentiment expressed within positive psychology (Seligman & Csikszentmihalyi, 2000) that well-being should be viewed as more than the absence of illness. Consequently, when assessing the implications of commitment for employee-relevant outcomes, we should look beyond indices of physical illness and psychological strain, or their absence, and include measures of personal growth and related indices of optimal functioning. Unfortunately, our ability to incorporate this directive into our review of existing research is limited by the fact that the majority of studies to date examined either (a) direct relations between commitment and various indices of physical and mental health or ill-health, or (b) the moderating effects of commitment on the relations between workplace stressors and indices of physical or psychological strain. However, we provide a more detailed discussion of different forms of well-being in the development of our general theoretical framework and recommendations for future research.

## What do we know about commitment and employee well-being?

Although fragmented and somewhat unsystematic, there is a fairly sizeable body of research linking commitment to employee well-being. We begin our review by examining direct links between commitment and various positive and negative health outcomes. We then shift our focus to research examining the moderating effects of commitment on the relations between workplace stressors and strain.

### *Direct links between employee commitment and well-being*

Although we refer here to “direct links,” it is important to note that virtually all of the studies to date have been correlational in nature and therefore, while a causal effect of commitment is implied, it cannot be confirmed. We address this limitation in more detail later in the context of future directions for research.

Existing research has consistently demonstrated positive relations between AC to the organization and indices of employee well-being, including overall physical well-being (e.g., Siu, 2002), general health (e.g., Bridger, Kilminster, & Slaven, 2007; Mor Barak, Levin, Nissly & Lane, 2006), mental health (e.g., Grawitch, Trares, & Kohler, 2007; Probst, 2003), positive affect (e.g., Thoresen, Kaplan, Barsky, Warren & de Chermont, 2003), job-related well-being (e.g., Epitropaki & Martin, 2005), self-esteem (e.g., Frone, 2007), and life satisfaction (e.g., Lu, Siu, Spector, & Shi, 2009; Zickar, Gibby, & Jenny, 2004). Negative relations have consistently been found with measures of strain, including psychosomatic symptoms (e.g., Addae & Wang, 2006; Richardson, Burke, & Martinussen, 2006), physical health complaints (e.g., Probst, 2003; Wegge, van Dick, Fisher, West, & Dawson, 2006), mental health complaints such as anxiety and depression (e.g., Epitropaki & Martin, 2005; Tucker, Sinclair, & Thomas, 2005), negative affect (e.g., Thoresen et al., 2003), burnout (e.g., Grawitch et al., 2007; Hakanen, Bakker, & Schaufeli, 2006), and felt stress, distress, general strain, and job-related tension (e.g., Daigle, 2007; Lambert, Hogan, & Griffin, 2008). The only exceptions to this general trend that we could find were a few studies that reported no statistically significant relation between AC and physical or psychological strain (e.g., Jamal, 2005; Littrell, Billingsley, & Cross, 1994; Majchrzak & Cotton, 1988; Marrs, 2000; Tan & Akhtar, 1998). We found no evidence to suggest that strong AC to the organization had detrimental implications for well-being. Thus, the bulk of the evidence suggests that having a strong AC to one's organization might have positive health benefits.

Only a few studies have examined the relations between CC to the organization and employee well-being or strain. Zickar et al. (2004) found a negative relation with life satisfaction, and other studies have reported positive relations with indices of strain, including job-related tension (e.g., Irving & Coleman, 2003), time anxiety (e.g., Addae & Wang, 2006), and emotional exhaustion (e.g., Bakker, Demerouti, de Boer, & Schaufeli, 2003; King & Sethi, 1997). Wegge et al. (2006) failed to find

significant relations between CC and negative emotions or health complaints, and Somers (2009) found non-significant relations between CC and job stress and carry-over stress (i.e., work-related stress that persists outside the workplace). Wittig-Berman and Lang (1990) found a negative correlation between commitment and physical symptoms of stress, personal alienation, and social alienation. Although these investigators interpreted their findings as pertaining to CC, the Hrebiniak and Alutto (1972) commitment scale used in this study has been found to relate more strongly with other measures of AC than with CC (Meyer & Allen, 1984). Consequently, rather than being one of the few studies to provide evidence of the positive health benefits of CC, Wittig-Berman and Lang's findings arguably provide additional support for the positive effects of AC. Finally, Wasti (2005) reported a small, albeit significant, negative correlation between CC and job stress in one sample of Turkish employees (the correlation was positive in a second sample).

Even fewer studies have examined relations with NC, with most reporting non-significant correlations with various indices of strain (Addae & Wang, 2006; Saks & Ashforth, 1997; Somers, 2009). The one exception was a study of Chinese employees where NC was found to correlate positively with emotional exhaustion (Tan & Akhtar, 1998). Tan and Akhtar noted that, for the Chinese, NC might reflect the internalization of normative pressures for loyalty and propriety that can result in greater job effort and possibly exhaustion.

Finally, relatively little attention has been given to examining health or ill-health as an outcome of commitment to other work-relevant foci. Among the exceptions, four studies reported negative correlations between AC to one's career, occupation, or profession and various symptoms of stress or burnout (Cohen, 1998; Miller, Ellis, Zook, & Lyles, 1990; Reilly, 1994; Yeh, Ko, Chang & Chen, 2007). Thus, there appear to be potential benefits for employees in having a strong AC to foci other than the organization.

In summary, AC tends to relate positively to well-being and negatively to strain. Studies of the other components of commitment are less common, but CC appears to relate positively to strain in many cases. Studies involving NC generally yield very weak relations. Potential explanations for, and implications of, these findings are discussed later.

#### *Commitment as a moderator of stressor–strain relations*

Aside from its direct relations with well-being and strain, commitment has also been posited as a moderator of stressor–strain relations. Two competing arguments have been offered with regard to the nature of these moderating effects. One argument is that a strong commitment gives employees a sense of purpose for their work and acts as a resource that buffers against the harmful effects of stressors (Kobasa, 1982; Lazarus & Folkman, 1984). The opposing perspective is that a strong commitment can increase employees' vulnerability to the negative effects of stressors (Brockner, Tyler, & Cooper-Schneider, 1992; Mathieu & Zajac, 1990) – that is, commitment will have an *exacerbating* effect. Lazarus and Folkman (1984) acknowledged the “double-edged” nature of commitment, noting that, while a strong commitment can motivate active coping under some conditions, it can also make a person “particularly vulnerable to psychological stress in the area of that commitment” (p. 58). Reilly (1994) referred to this as the “paradox” of commitment.

Most research on the moderating effects of commitment has involved the use of moderated multiple regression. If commitment acts as a buffer, the pattern of results should look something like Fig. 1a – that is, the positive relation between a stressor and strain should decrease in strength as commitment increases to the organization. In contrast, if commitment exacerbates the effect of the stressor on strain, the results should be the opposite, as depicted in Fig. 1b – the positive relation between the stressor and strain should increase in strength with increasing commitment.

Among the several studies that have now been conducted to test for moderating effects, results have been mixed. Some studies provide evidence for a buffering effect of AC (e.g., Begley & Czajka, 1993; Hochwarter, Perrewé, Ferris, & Guercio, 1999; Schmidt, 2007), whereas others report no effect (e.g., Leong, Furnham, & Cooper, 1996) or an exacerbating effect (e.g., Irving & Coleman, 2003; Reilly, 1994). Similarly, studies examining the effects of CC have reported either an exacerbating effect (Irving & Coleman, 2003) or no effect (King & Sethi, 1997). Summarizing and interpreting these conflicting findings is somewhat complicated by the fact that researchers interested in the moderating effects of commitment have focused on different links within the stressor–strain process. Therefore, to provide structure to this review, we identify three broad categories of variables involved in the process: actual or perceived stressors, initial reactions to these stressors, and longer-term physical and psychological strain. These three variable categories, and the theoretical links between them, are depicted in Fig. 2, along with the purported loci of moderating effects.

#### *Effects of stressors on initial reactions*

Three studies examined the moderating effect of commitment on initial reactions to perceived stressors. The first two studies were conducted by Hochwarter et al. (1999) and provided evidence for a buffering effect of AC on the relation between perceived organizational politics and job tension – that is, the relation was stronger for employees with weak as opposed to strong AC to the organization. In the third study, Irving and Coleman (2003) tested for moderating effects of both AC and CC to the organization on the relation between role ambiguity and job tension. Although AC was negatively related to job tension, the relation between role ambiguity and tension was *stronger* for the more committed employees. Irving and Coleman interpreted their findings as evidence for an exacerbating effect of AC. However, a plot of the regression lines reflects a pattern like that depicted in Fig. 1c. When role ambiguity was low, the strain experienced by employees with strong AC was considerably lower than that for employees with weak AC. Although the impact of stressors was greater for employees with strong as opposed to weak AC, the strain level for the former did not exceed that of the latter even at high levels of ambiguity. This is a potentially

important difference and henceforth we will refer to effects like that in Fig. 1c (i.e., where a negative main effect is combined with a positive interaction) as *pseudo-exacerbation*.

Irving and Coleman (2003) found that, unlike AC, CC was positively related to job tension. Moreover, CC was found to have a true exacerbating effect on the relation between role ambiguity and job tension – the impact of role ambiguity was greater for those with strong as opposed to weak CC, as depicted in Fig. 1b. Thus, CC arguably contributes directly to job tension and also increases employees' sensitivity to workplace stressors.

*Effects of stressors on strain/well-being*

Several studies have now been conducted to examine the moderating effects of commitment on the links between stressors and longer-term physical and psychological reactions (Donald & Siu, 2001; Galais & Moser, 2009; King & Sethi, 1997; Leong et al., 1996; Reilly, 1994; Schmidt, 2007; Siu, 2002; Siu & Cooper, 1998). By longer-term, we do not necessarily mean that the studies were longitudinal, although some were. Rather, we are referring to the fact that the reaction measures reflect physical or psychological effects (health or illness) that presumably require a longer exposure to work conditions than the initial reactions discussed above (cf. Glazer & Kruse, 2008).

The findings of these studies have also been mixed, with the majority providing evidence for a buffering effect of AC (Donald & Siu, 2001; King & Sethi, 1997; Schmidt, 2007; Siu, 2002; Siu & Cooper, 1998), one indicating a pseudo-exacerbating effect (Reilly, 1994), and one suggesting no moderation (Leong et al., 1996). Still other studies have reported mixed results depending on the focus of the commitment (Galais & Moser, 2009) or time-frame (Armstrong-Stassen, 2004). Several of the

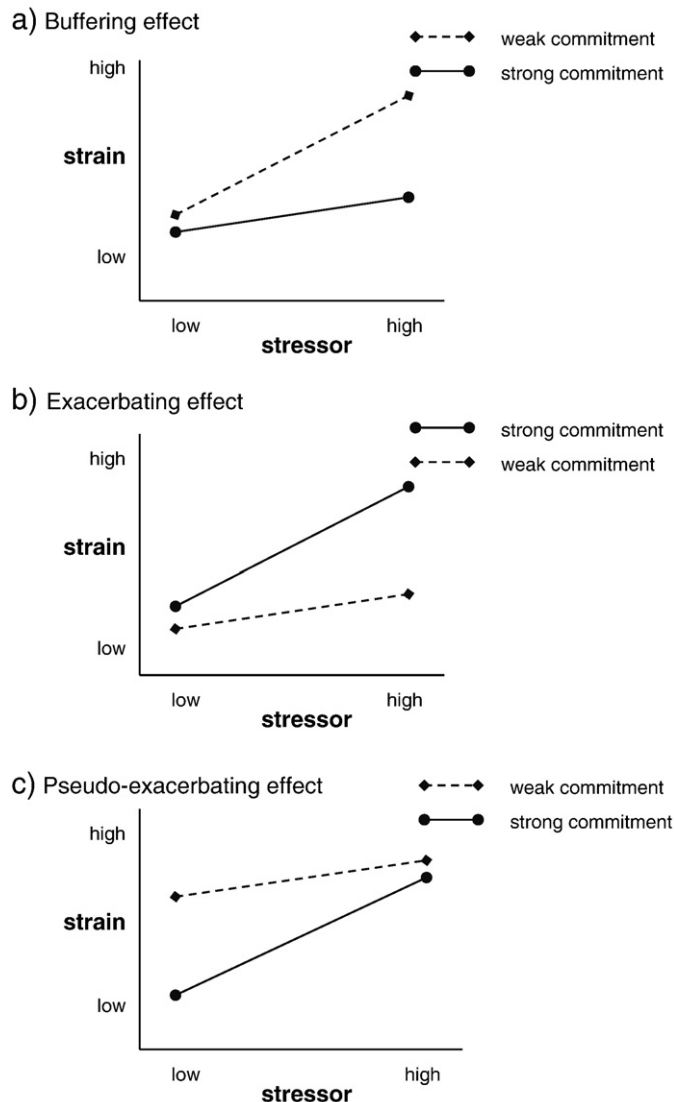


Fig. 1. Regression slopes reflecting buffering, true exacerbation, and pseudo-exacerbation effects of commitment.

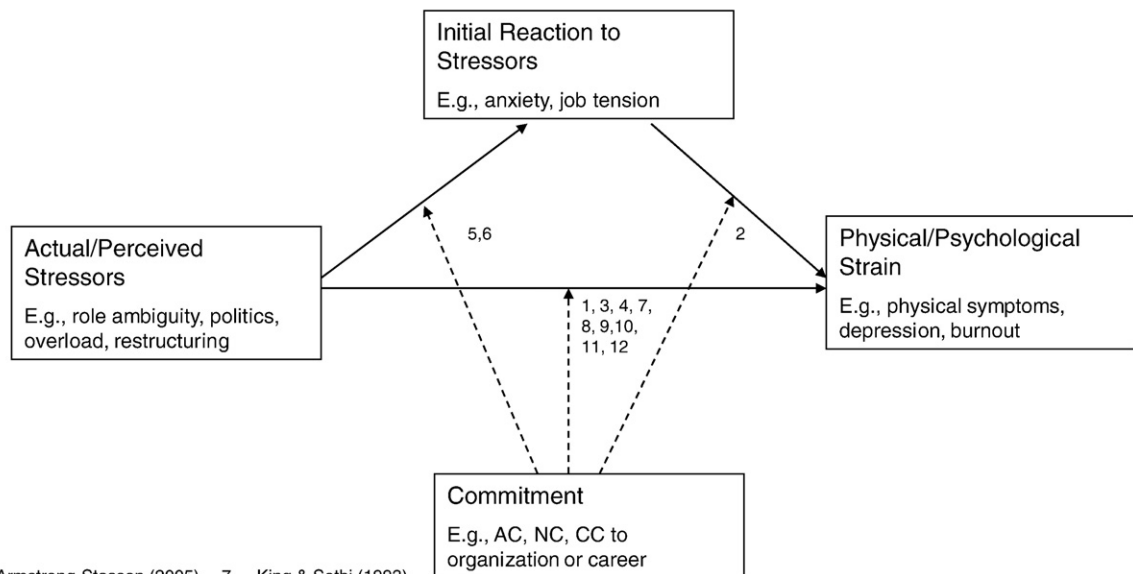
studies that reported evidence for a buffering effect used the Occupational Stress Indicator (OSI: Cooper, Sloan, & Williams, 1988) to measure perceptions of workplace stressors (e.g., work load; role ambiguity) and both mental and physical ill-health (Siu, 2002; Siu & Cooper, 1998). However, Leong et al. found no evidence of moderation using these same measures. Other investigators found evidence for a buffering effect of AC on the impact of environmental stressors (e.g., ventilation, illumination, and temperature) on ill-health (Donald & Siu, 2001), and on the impact of quantitative and qualitative workload (Schmidt, 2007) and role stressors (King & Sethi, 1997) on burnout.

Galais and Moser's (2009) study is particularly interesting in that it tested for the moderating effect of AC to two foci (the employment agency and client organization) for a unique segment of the workforce (those with temporary work arrangements). A longitudinal design allowed the investigators to examine the moderating effects of AC on the relation between an actual (as opposed to perceived) stressor – reassignment to a new client organization – and changes in psychosomatic complaints over time.

Galais and Moser (2009) found that the moderating effect of AC differed depending on its focus. AC to the client organization exacerbated the effect of reassignment on a measure of psychosomatic complaints – those who were committed to the client organization experienced a greater increase in psychosomatic complaints following reassignment than those with weak commitment. However, AC to the agency had a buffering effect – employees with a weak commitment to the agency experienced a greater increase in psychosomatic complaints than those with a strong commitment.

Reilly (1994) also reported evidence for an exacerbating effect of AC on stressor–strain relations. This study was unique in that it examined the impact of career commitment rather than organizational commitment. Reilly found that hospital nurses with a strong AC to nursing were less likely to report burnout, but that the impact of work stressors (e.g., workload, difficult relationships) on burnout was greater for nurses with strong as opposed to weak commitment. When plotted, this combination of a negative main effect and positive moderating effect of AC yielded the pseudo-buffering effect depicted in Fig. 1c.

Finally, Armstrong-Stassen (2004) examined the effects of AC and CC on stressor–strain relations using a somewhat different approach. Specifically, she set out to determine the effect that nurses' (Study 1) and managers' (Study 2) AC and CC to the organization prior to a downsizing would have on physical symptoms and burnout during and/or following the downsizing. She hypothesized that AC would be associated with the use of control-oriented coping strategies and that this would ameliorate the negative health effects of the downsizing. In contrast, she hypothesized that CC would be associated with avoidance-coping strategies and increased vulnerability to negative health effects. Although the results were complex and varied across the two studies, her hypotheses regarding the coping strategies associated with AC and CC were largely supported. Interestingly, however, any health benefits of prior AC were experienced early in the downsizing process – unexpectedly, AC related positively to physical symptoms in the longer term, and these relations were mediated by control-oriented coping. Armstrong–Stassen argued that, over time, a control-oriented approach to coping requires a large investment of energy that can have negative



- |                             |                         |
|-----------------------------|-------------------------|
| 1. Armstrong-Stassen (2005) | 7. King & Sethi (1993)  |
| 2. Begley & Czjaka (1993)   | 8. Leong et al. (1998)  |
| 3. Donald et al. (2002)     | 9. Reilly (1994)        |
| 4. Galais & Moser (2009)    | 10. Schmidt (2007)      |
| 5. Hochwarter et al. (1999) | 11. Siu (2008)          |
| 6. Irving & Coleman (2003)  | 12. Siu & Cooper (1998) |

Fig. 2. Moderating effects of commitment on stressor–strain relations.



implications for well-being. These findings attest to the importance of taking a long-term perspective in the investigation of the health-related effects of commitment. We return to this point later in our discussion of future research.

#### *Effects of initial reactions on longer-term strain/well-being*

The first published study of the moderating effect of AC was conducted by Begley and Czajka (1993). Although described by the investigators as a test of the moderating effect of AC on the stressor–strain relation, Glazer and Kruse (2008) argued that it is more appropriately considered a test of the moderating effect of AC on the relation between initial reaction (i.e., felt stress) and longer-term strain (work-related depression, work-related irritation, and somatic complaints). Begley and Czajka measured the outcome variables twice, three months apart, during an organizational change (i.e., consolidation of divisions in a mental health hospital). Commitment and felt stress were measured on the second occasion and were included along with the product of the two measures in moderated regression analyses to predict a composite Time 2 outcome measure with the Time 1 measure controlled. The investigators reported a significant negative main effect of commitment as well as a significant negative interaction, suggesting a buffering effect of AC. For employees with weak commitment, feelings of stress during the change were accompanied by a decrease in physical and psychological well-being over time. For those employees with strong AC, felt stress was unrelated to changes in physical and psychological well-being.

#### *Summary*

There are both consistencies and inconsistencies in research findings pertaining to the moderating effects of employee commitment in the network of connections among workplace stressors, initial reactions, and strain/well-being outlined in Fig. 2. The most consistent findings were obtained in research examining the buffering effect of AC, although even here there are some conflicting findings (Irving & Coleman, 2003; Leong et al., 1996; Reilly, 1994).

### **Employee commitment and well-being: toward a theoretical framework**

Several potential explanations have been offered to account for the implications of commitment for employee well-being, particularly for its buffering effects on stressor–strain relations (e.g., Glazer & Kruse, 2008; Irving & Coleman, 2003; Schmidt, 2007). For the most part, these explanations derive from theories of stress (e.g., Bakker & Demerouti, 2006; Karasek, 1979; Kobasa, 1982; Lazarus & Folkman, 1984) and propose that employees with strong AC are either less likely to experience workplace stressors, or to have greater access to resources (e.g., social support) to help them cope with the stressors they do encounter. While these explanations are useful and help to ground commitment within the broader stress literature, the underlying mechanisms have yet to be investigated empirically. Moreover, the various explanations have yet to be integrated into a comprehensive theoretical framework to guide future research. Finally, and perhaps most importantly, the focus has been on the implications of commitment for the prevention of strain rather than for the promotion of physical and psychological well-being. Therefore, our objective here is to provide such a framework, based on an integration of the TCM of commitment (Meyer & Allen, 1991, 1997) and Deci and Ryan's self-determination theory of motivation (SDT: Deci & Ryan, 1985; Ryan & Deci, 2000).

There are several reasons for including SDT as a basis for our theoretical framework. First, a major focus of the theory is on understanding psychological health, and its propositions have been evaluated successfully in various contexts, including the workplace (see Gagné & Deci, 2005). Second, SDT has recently been used to help clarify the distinction between hedonic and eudaimonic well-being (Ryan & Deci, 2001; Ryan, Huta, & Deci, 2008). As discussed below, the focus on eudaimonic well-being is consistent with the objectives of the positive psychology movement (Seligman & Csikszentmihalyi, 2000). Finally, SDT as a framework for understanding human motivation has been shown to be compatible with the TCM, and to be helpful in understanding the mechanisms by which commitment exerts its effects on job performance and employee engagement (Meyer, Becker, & Vandenberghe, 2004; Meyer, Gagné, & Parfyonova, in press). Consequently, it can be used as a common basis for understanding the implications of commitment for both employer- and employee-relevant outcomes.

In what follows, we provide a general overview of four key aspects of SDT that are of particular relevance to our objectives: the quality of motivation, basic human needs, situational influences on motivation, and the nature of well-being. We then discuss the links between SDT and commitment, and present our general theoretical framework. Although well grounded in theory, this framework introduces relationships that have yet to be established empirically. Therefore, we also offer a set of propositions to guide future research.

#### *Core components of SDT*

At the heart of SDT is the identification of three psychological needs: autonomy (deCharms, 1968), competence (White, 1959), and relatedness (Beaumeister & Leary, 1995). According to SDT, these needs are the basic nutrients required for psychological health. Consequently, it is the satisfaction of these needs rather than their strength that determines well-being (Ryan & Deci, 2000). The need for autonomy is satisfied when, at the deepest levels of reflection, individuals believe that what they are doing is freely chosen and consistent with their core values. The need for competence is satisfied when people believe they have the capability and resources needed to accomplish their tasks and achieve their objectives. Finally, the need for relatedness is satisfied when they feel valued and appreciated by others. Satisfaction of these needs is a prerequisite for the experience of autonomous regulation.

Unlike many theories of motivation that focus primarily on the quantity, strength, or amount of motivation, SDT also makes a quality distinction. Initially, the distinction was between intrinsic motivation (i.e., enjoyment of the task itself) and extrinsic motivation (desire to attain contingent outcomes). A later refinement involved the identification of different forms of extrinsic motivation. When people engage in tasks to attain rewards or avoid punishments meted out by others, they feel controlled and are said to experience *external regulation* of their behavior. In contrast, when individuals engage in activities that are freely chosen and consistent with their values, they feel more autonomous and experience *identified* or *integrated regulation* – in the latter case these values are integral to one's self-concept. An intermediate form of regulation (i.e., *introjected regulation*) is experienced when individuals internalize the external constraints and evaluate their actions accordingly, but do not fully endorse the behavior as consistent with their true values. For purposes of subsequent discussion, we refer to intrinsic motivation along with integrated and identified regulation as *autonomous regulation*; by contrast, external and introjected regulation together are referred to as *controlled regulation*.

A third important component of SDT involves the situational factors that contribute to the satisfaction of the basic needs and the experience of autonomous regulation. Deci, Eghari, Patrick, and Leone (1994) initially identified three specific *autonomy-supportive* conditions that they believed would contribute to need satisfaction: a meaningful rationale for performing a task, acknowledgement that the activity, albeit important, might not be intrinsically interesting, and emphasis on choice rather than control (e.g., providing discretion on when or how the task is performed). They manipulated these conditions in a laboratory context and found the strongest levels of internalization when at least two of the three were present. More recently, Parfyonova (2009) assessed an expanded list of autonomy-supportive managerial behaviors – provision of choice, provision of rationale, clear expectations, feedback, acknowledgement of feelings, and concern for employees' needs – and found that all related positively to need satisfaction and to perceptions of autonomous regulation. Because these conditions contributed to the satisfaction of all three needs to varying degrees, rather than only the need for autonomy, we refer to them hereafter as *need-supportive work conditions*.

Finally, in one of its more recent developments, SDT differentiates between two approaches to conceptualizing well-being: hedonic and eudaimonic (Ryan & Deci, 2001; Ryan et al., 2008). According to Ryan et al. (2008, p. 140), “eudaimonic conceptions focus on the *content* of one's life, and the *processes* involved in living well, whereas hedonic conceptions of well-being focus on a specific *outcome*, namely the attainment of positive affect and an absence of pain.” Thus, unlike hedonic well-being that is viewed as a positive state of mind, eudaimonia is a lifestyle that is associated with outcomes beyond happiness, including a sense of meaning, vitality, and physical health. For simplicity, we use the term *eudaimonic well-being* hereafter to refer to both the lifestyle and its consequences.

Hedonic well-being and eudaimonia are related, although the relationship is believed to be asymmetric – eudaimonia is considered a sufficient but not necessary condition for hedonic well-being, whereas hedonic well-being is neither sufficient nor necessary to experience eudaimonia (cf. Waterman, Schwartz, & Conti, 2008). As noted earlier, because it goes beyond pleasure as an outcome, the focus on eudaimonic well-being is consistent with the objectives of positive psychology (Seligman & Csikszentmihalyi, 2000).

Putting the pieces together, SDT posits that individuals who encounter need-supportive conditions are more likely to have their core psychological needs satisfied and experience greater autonomous (vs. controlled) regulation as they pursue goal-related activities than are those who operate in non-supportive environments (Gagné & Deci, 2005). Research conducted in organizational contexts has repeatedly demonstrated that employees whose needs are satisfied and who feel autonomously regulated are more engaged in their work, perform more effectively, and experience greater psychological adjustment and well-being (e.g., Baard, Deci, & Ryan, 2004; Deci et al., 2001; Gagné, Koestner, & Zuckerman, 2000; Ilardi, Leone, Kasser, & Ryan, 1993; Parfyonova, 2009).

#### *SDT and commitment*

Meyer et al. (2004) argued that there are strong parallels between the commitment mindsets identified in the TCM and the motivational processes outlined in SDT (cf. Meyer et al., 2010). More specifically, they proposed that AC would be accompanied by more autonomous forms of regulation, whereas CC would be associated with more controlled forms. Given its obligation base, it was argued that NC might be more strongly associated with introjected regulation than with external or autonomous regulation. A recent study by Gagné, Chemolli, Forest, and Koestner (2008) provided partial support for these hypotheses. On two separate administrations of a survey to Italian automotive employees, they found that AC related more strongly to a measure of autonomous regulation than to measures of introjected and external regulation. Correlations involving CC varied as a function of whether it was measured in terms of perceived sacrifice (CC:HiSac) or lack of alternatives (CC:LoAlt). CC:HiSac correlated similarly (modestly positive) with all three forms of motivation, whereas CC:LoAlt correlated most strongly with external regulation and negatively with autonomous regulation. Finally, NC had the highest correlation with introjected regulation of all the components, but its correlation with autonomous regulation was also strong.

The latter observation regarding NC is consistent with recent findings demonstrating that NC can have “two faces,” one reflecting a *moral imperative*, and the other reflecting *indebted obligation* (Gellatly, Meyer, & Luchak, 2006; cf. Meyer & Parfyonova, 2010). The moral imperative mindset is experienced when NC combines with strong AC (i.e., “I want to do X because it is the right thing to do.”); the indebted obligation mindset results from a combination of strong NC and CC with weak AC (i.e., “I ought to do X because others expect/require it.”) This distinction has potentially important implications that we discuss in more detail below.

Meyer et al. (2004) initially proposed that the nature of employees' commitment to the organization would influence the nature of their motivation for day-to-day activities, but that the latter would also be instrumental in shaping commitment over

the longer term. Gagné et al. (2008) found stronger evidence for a time-lagged effect of motivation on commitment than for the reverse. However, given the paucity of research addressing causal direction, for purposes of subsequent discussion we assume that the nature of employees' commitment and motivation are related and allow for the possibility that the causal effects are reciprocal.

Implicit in the proposed links between commitment and autonomous regulation is the notion that commitment mindsets are differentially related to the satisfaction of the needs for autonomy, competence, and relatedness. Although research is limited, there is some preliminary evidence suggesting that this might indeed be the case. In a study of employees from diverse occupations and organizations, Greguras and Diefendorff (2009) found that AC was positively associated with the satisfaction of all three needs. In a sample of health care employees, Meyer, Parfyonova, and Stanley (2010) found that both AC and NC correlated significantly with the satisfaction of all three needs, whereas correlations involving CC were near zero. Not surprisingly, they also found that correlations between the components of commitment and various indices of well-being paralleled their correlations with need satisfaction.

Although we are unaware of any studies attempting to link the need-supportive work conditions identified in SDT to the three components of commitment, there are intuitive links between these conditions and the variables identified in meta-analyses as particularly strong correlates of AC – perceived organizational support (POS), organizational justice, person-organization fit, and transformational leadership (Kristof-Brown, Zimmerman & Johnson, 2005; Meyer et al., 2002; Colquitt, Conlon, Wesson, Porter, & NG, 2001; Rhoades & Eisenberger, 2002). The need-supportive work conditions are also compatible with the high commitment HRM practices that have been linked to the development of AC (e.g., Whitener, 2001), and with the job resources (e.g., social support, supervisory coaching, performance feedback) that have been found to relate to AC in research pertaining to the Job Demands-Resources model of stress (e.g., Bakker, Demerouti, & Schaufeli, 2003).

The results of the preliminary studies reviewed above confirm that there may indeed be links between the mindsets characterizing employees' commitment to their organizations and the various components of SDT. Although issues of causality remain to be addressed, one plausible interpretation for the findings is that the commitment and motivational mindsets identified in the TCM and SDT, respectively, are linked, and that both are a function of the extent to which conditions at work contribute to the satisfaction of the core needs for autonomy, competence, and relatedness. Therefore, in the general theoretical framework to follow, we propose that need satisfaction serves as the basis for employees' motivation and commitment mindsets, and helps to explain why some forms of commitment are positively associated with well-being and buffer the negative effects of stressors, whereas other forms of commitment are negatively related to well-being and exacerbate the effects of stressors on strain.

### *Theoretical framework*

Our proposed theoretical framework is depicted in Fig. 3. Based on the discussion above, we propose that AC – the desire to maintain membership in the organization – is associated with autonomous regulation, or the belief that one is behaving in accord with one's intrinsic interests or values. The mindset of desire to belong and to carry out one's duties derives from the fact that conditions at work are such that the employee's needs for autonomy, competence, and relatedness are satisfied.

**Proposition 1.** *AC is positively associated with need-supportive work conditions, satisfaction of the needs for autonomy, competence, and relatedness, and autonomous regulation. The effects of need-supportive conditions on AC are mediated by need satisfaction, and the mindset of autonomous regulation has a reciprocal relation with AC.*

The conditions associated with the development of AC are commonly found to be unrelated or negatively related to CC (Meyer et al., 2002). When the relations are negative, it might be because employees with strong CC are forced to remain and endure conditions that do not satisfy their core needs. Consequently, they are likely to experience controlled as opposed to autonomous regulation as they engage in their day-to-day work activities.

**Proposition 2.** *CC is negatively related to need-supportive work conditions and satisfaction of the needs for autonomy, competence and relatedness. CC has a positive reciprocal relation with controlled regulation.*

The conditions found to relate positively to AC have typically also been found to relate positively, albeit less strongly, to NC. In light of the evidence reviewed above pertaining to the two faces of NC, we expect that it is the moral imperative aspect of NC that is strengthened under conditions where all three needs are reasonably satisfied. In this case, we expect NC to relate to other variables in the model much like AC. However, under conditions where the need for autonomy is not fully satisfied, NC might be experienced more as indebted obligation (e.g., the need to reciprocate or to satisfy the expectations of others). In this case, we expect employees with strong NC to experience a sense of controlled regulation, and to relate to other variables in the model more like CC than like AC.

**Proposition 3a.** *When experienced as a moral imperative, NC is positively related to need-supportive work conditions, satisfaction of the needs for autonomy, competence, and relatedness, and autonomous regulations in the same way as AC.*

**Proposition 3b.** *When experienced as indebted obligation, NC is negatively related to need-supportive work conditions and satisfaction of the needs for autonomy, competence, and relatedness, and positively related to controlled regulation in the same way as CC.*

Turning to the health-related outcomes of commitment, it was clear from our earlier review that AC generally relates positively to various indices of well-being and negatively to indices of strain. To date, little has been made of the distinction between hedonic and eudaimonic well-being, but many of the variables included as health outcomes (e.g., general physical and



mental health; life satisfaction) are traditionally considered measures of hedonic well-being. Consequently, we can conclude that the positive link between AC and hedonic well-being has been reasonably well established. However, as research on the implications of commitment for employee well-being moves forward, it would be useful to look beyond hedonic well-being. Given that SDT has recently been presented as a framework for understanding eudaimonic well-being, we can use the links between SDT and the TCM to speculate on the latter's implications for eudaimonic well-being as well.

Recall that eudaimonia is considered a positive lifestyle that contributes to desirable outcomes including personal growth, a sense of meaningfulness, vitality, and psychological and physical health (Ryan et al., 2008; Ryff & Singer, 2008; Waterman et al., 2008). According to Ryan et al., eudaimonia requires satisfaction of the full complement of needs and a sense of autonomous regulation. Because these conditions are also associated with the development of a strong AC to the organization (see Proposition 1), it follows that AC should relate positively to eudaimonic well-being. Perhaps the most direct evidence of the link between AC and eudaimonic well-being comes from recent studies demonstrating positive relations with engagement (vigor, dedication, and absorption; e.g., Hallberg & Schaufeli, 2006) and positive psychological capital (hope, resilience, optimism, and efficacy; e.g., Luthans, Norman, Avolio, & Avey, 2008). Both engagement and psychological capital reflect more than the absence of strain and are viewed as being aligned with the objectives of positive psychology.

**Proposition 4.** *Employees with a strong AC to the organization will experience both hedonic and eudaimonic well-being.*

Ryan et al. (2008) argued that hedonic well-being can be achieved, at least in the short term, under conditions of external regulation. For example, an individual who achieves the rewards used by others to shape his/her behavior (e.g., monetary incentives; promotions) is likely to feel pleasure in the accomplishment, at least until he/she refocuses attention on the need to attain the next reward. Such accomplishments might also contribute to satisfaction of the need for competence, but they are unlikely to satisfy the need for autonomy. Therefore, strong CC, even in the absence of AC, could contribute to hedonic well-being if the costs associated with leaving include the opportunity to achieve and enjoy externally controlled rewards. However, if the work itself is tolerated rather than satisfying, it is unlikely that employees will experience eudaimonic well-being. Moreover, if the CC results from a sense of being trapped in the organization due to a lack of alternatives (i.e., CC:LoAlt), it is unlikely that the employee will experience even hedonic well-being, let alone eudaimonic well-being.

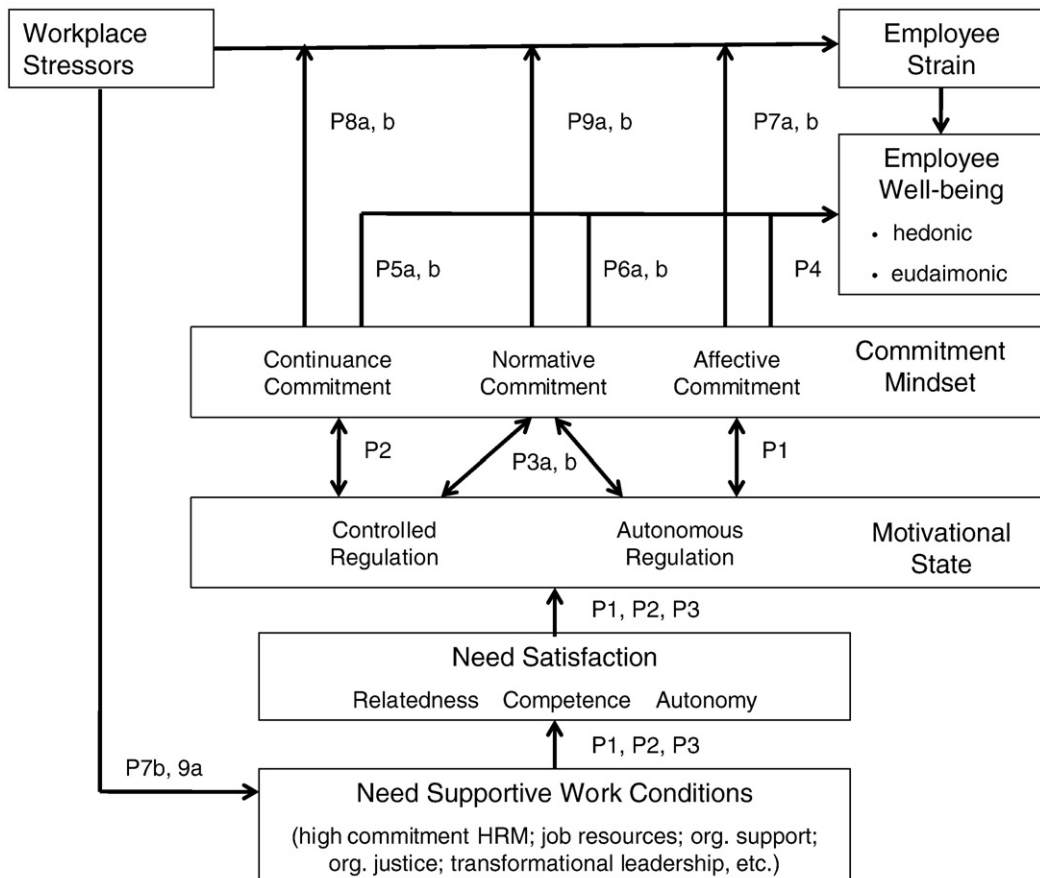


Fig. 3. A process model of the effects of commitment on employee well-being.

**Proposition 5a.** *Employees with a strong CC in the absence of a strong AC can experience hedonic well-being to the extent that the basis of the cost is the attainment of desired but externally-controlled outcomes (i.e., CC:HiSac). However, these employees are unlikely to experience eudaimonic well-being.*

**Proposition 5b.** *Employees whose strong CC reflects only the absence of alternatives (i.e., CC:LoAlt) will experience neither hedonic nor eudaimonic well-being.*

Because NC can be experienced in different ways, its implications for hedonic and eudaimonic well-being can mirror those of AC or CC. That is, when experienced as a moral imperative, NC is likely to be associated with need satisfaction and autonomous regulation and, like AC, should relate positively with both hedonic and eudaimonic well-being. However, when experienced as indebted obligation, the need for autonomy is unlikely to be satisfied. If the remaining needs are satisfied, employees might experience hedonic well-being, but, as in the case of CC, they are unlikely to experience eudaimonic well-being.

**Proposition 6a.** *Employees who experience NC to the organization as a moral imperative will experience both hedonic and eudaimonic well-being.*

**Proposition 6b.** *Employees who experience NC to the organization as indebted obligation can experience hedonic well-being to the extent that their needs for relatedness and/or competence are satisfied, but they will not experience eudaimonic well-being.*

To this point, we have focused exclusively on explaining the “main effects” of commitment. As noted earlier, another objective is to explain the moderating effects of commitment on stressor–strain relations, as well as the inconsistencies that have been observed in previous research. Recall that AC is sometimes found to buffer the effects of stressors on strain and other times is found to have no moderating effect or an exacerbating effect. The explanation for a buffering effect follows directly from the preceding discussion – employees with strong AC are more likely than those with weak AC to experience work conditions that satisfy their basic needs. They are also more likely to have access to the resources needed to cope with stressors (Bakker & Demerouti, 2006; Hobfoll & Shirom, 2001; Lazarus & Folkman, 1984). Why, then, do some researchers find evidence for an exacerbating effect?

Recall that two of the studies reporting exacerbating effects of AC (i.e., Irving & Coleman, 2003; Reilly, 1994) actually found evidence for a pseudo-exacerbating effect as depicted in Fig. 1c. That is, both found a significant negative relation between AC and strain in addition to the positive moderating effect. This pattern of findings, which Reilly referred to as the paradox of commitment, suggests that commitment itself has potential health benefits but, under some conditions, can increase employees' vulnerability to workplace stressors. It is important to note, however, that even when this happens, the strain experienced by employees with strong AC may not exceed that of employees with weak AC.

Even if the findings of these two studies reflect only pseudo-exacerbation, they require explanation. Although not definitive, the results of two other studies reviewed earlier suggest potential explanations. First, recall that Galais and Moser (2009) found that the effect of reassignment among temporary workers was buffered by AC to the employment agency, but exacerbated by AC to the client organization they were leaving. Galais and Moser speculated that commitment to the client organization exacerbated the negative impact of reassignment because the relationship being severed was an important one. Consequently, the change might have reduced satisfaction of the need for relatedness and perhaps limited access to support. Being reassigned “against one's will” also threatens autonomous regulation. By contrast, the fact that AC to the employment agency served as a buffer may have been due to perceptions of the agency as a continuing source of support, as well as a shared belief that the agency's success requires flexibility in the assignment of temporary staff.

Armstrong-Stassen (2004) found that AC to an organization prior to its undergoing a downsizing related negatively to strain in the short term, but related positively to strain measured a few years later. One possible explanation for these findings is that highly committed employees have the resources needed to help them cope with the change, but that these resources become depleted over time and threatened satisfaction of the need for competence. It is also possible that committed employees have a sense of identity that helps to provide meaning to their work and buffers the effects of the transition in the short term, but that this identity itself is challenged in the longer term as the organization changes – this might be accompanied by a reduction in satisfaction of the needs for autonomy and/or relatedness.

Taken together, the results of these studies suggest that employees with a strong AC can indeed be vulnerable to stressors that undermine the conditions that otherwise contribute to its positive effects. That is, an exacerbating or pseudo-exacerbating effect of AC should be more likely when the workplace stressor undermines satisfaction of employees' needs for autonomy, competence, and/or relatedness thereby reducing their sense of autonomous regulation, and presumably AC itself.

**Proposition 7a.** *The buffering effect of AC occurs because it is associated with conditions that provide employees with the internal or external resources needed to cope with the stressor.*

**Proposition 7b.** *An exacerbating or pseudo-exacerbating effect of AC occurs when workplace stressors undermine conditions contributing to the satisfaction of employees' core needs and sense of autonomous regulation.*

Turning to CC, recall that only two studies to date have reported findings pertaining to its moderating effect on stressor–strain relations. King and Sethi (1997) found no evidence for a moderating effect, whereas Irving and Coleman (2003) reported an exacerbating effect. This suggests that, while an exacerbating effect of CC is possible, it might only occur under certain conditions. Because CC has been found to have a direct negative link to well-being and a positive relation with strain, it appears that the experience of entrapment associated with CC can be stressful in and of itself, perhaps because it threatens the need

for autonomy. Therefore, it is possible that strong CC provides a relatively high baseline of stress so that when additional stressors are encountered, the reaction is greater.

The absence of an exacerbating effect of CC, as observed by King and Sethi (1994), might be explained by the fact that CC can sometimes result from the threatened loss of desirable working conditions (see Powell & Meyer, 2004). In such cases, CC might be accompanied by strong AC and NC in a high commitment profile (Gellatly et al., 2006; Meyer et al., 2010). If so, one would not expect CC to provide a high baseline of stress. However, in the absence of strong empirical evidence, we can only speculate on the reasons for the inconsistency in the moderating effect of CC. Therefore, we offer the following propositions to guide future research.

**Proposition 8a.** *Strong CC will exacerbate the effect of workplace stressors on strain under conditions where CC creates a high baseline of stress and contributes to employees' inability to escape the stressful situation.*

**Proposition 8b.** *Strong CC will not exacerbate the effect of workplace stressors when the potential costs are factors that also contribute to strong AC.*

To date there have been no studies we are aware of that address the moderating effects of NC on the stressor–strain relation. In light of our earlier discussion of the two faces of NC, we anticipate that NC experienced as a moral imperative will operate much like AC. That is, it will serve as a buffer to the extent that it facilitates access to the internal and external resources needed to cope. However, a pseudo-exacerbation effect will be observed when the effect of the stressor is such that it undermines the conditions that contribute to the sense of moral imperative. In contrast, when NC is experienced as an indebted obligation, it is more likely to operate like CC, and serve to exacerbate the effects of stressors on strain.

**Proposition 9a.** *When experienced as a moral imperative, NC can serve to buffer the effects of stressors on strain. However, it can have a pseudo-exacerbating effect when workplace stressors undermine conditions contributing to the satisfaction of employees' core needs and sense of autonomous regulation.*

**Proposition 9b.** *When experienced as an indebted obligation, strong NC will exacerbate the effect of workplace stressors on strain under conditions where it creates a high baseline of stress and contributes to employees' inability to escape the stressful situation.*

## Directions for future research

Although well grounded in theory and related research, several aspects of our theoretical framework remain to be tested. Indeed, we offered several propositions that we hope will provide direction for this research. In the discussion that follows, we address a number of methodological issues that deserve attention in the design of future studies. These issues include a) the conceptualization and measurement of well-being, b) the use of longitudinal research designs to examine relations over time, and c) the importance of considering commitment profiles.

To date, research pertaining to the implications of commitment for well-being has paid little regard to the complexities of well-being and, most notably, to the distinction between hedonic and eudaimonic well-being. Despite the fact that it dates back to Aristotle (see Ryan et al., 2008), attention to this distinction is admittedly quite new within the health and well-being literature, or at least has been rejuvenated by the positive psychology movement (Seligman & Csikszentmihalyi, 2000). In any case, it is worthy of further consideration. Self-report measures of eudaimonic well-being currently exist (e.g., Ryff & Singer, 1998; Waterman, 1993) and, as noted earlier, there are measures of employee engagement (Hallberg & Schaufeli, 2006) and positive psychological capital (Luthans et al., 2008) that assess related outcomes. However, given the relative novelty of the construct, further attention may need to be directed to conceptualization and measurement. Greater attention should also be paid to the links between subjective measures of well-being and more objective indicators of physical and mental health (see Ryff and Singer, 2008, for examples of such studies).

Although much of the previous discussion, as well as our theoretical framework, were predicated on the belief that the nature of employees' commitment is influenced by work conditions that satisfy or fail to satisfy their core psychological needs, and that commitment in turn exerts direct and moderating effects on well-being, the supporting evidence comes largely from cross-sectional survey studies. Interestingly, it is exceptions such as Armstrong-Stassen's (2004) longitudinal examination of the relations between prior commitment and subsequent strain due to downsizing, and Galais and Moser's (2009) study of the effects of temporary employees' reactions to reassignment, that provided the greatest insight into the potential mechanisms underlying the effects of commitment. Admittedly, even these studies lack the benefits of manipulation and control found in double-blind randomized experiments. However, given the nature of the variables involved, it is unlikely that such experiments will be possible. Therefore, there is a need for more longitudinal research. Ideally, this research would include measures reflecting the antecedents (i.e., need-supportive work conditions; need satisfaction) of commitment as well as measures of hedonic and eudaimonic well-being as outcomes. This would permit a more rigorous assessment of the role played by commitment in explaining the relations between work conditions and employee well-being. One such study was conducted recently by Panaccio and Vandenberghe (2010). They found that commitment fully mediated the relation between POS and a measure of hedonic well-being obtained one year later. Even stronger research designs would include multiple waves of data collection to permit the application of analytic techniques such as latent growth modeling (LGM: Chan, 2002) that allow for the assessment of relations between both absolute levels and rates of change among variables (see Vandenberg & Stanley, 2009, for a more detailed discussion).

Finally, most of the research conducted to date has focused on relations between individual components of commitment. However, as we noted above in the case of NC, this can sometimes mask complexities in the data. This might also be true for the other components. In fact, it should be noted that in our discussion of the implications of CC for well-being, we provided as a qualifier that CC be experienced in the absence of strong AC. The potentially negative implications of CC are likely to be mitigated by strong AC. Indeed, CC might be experienced quite differently – as the loss of valued resources – when AC is strong than when AC is weak. Therefore, we strongly encourage researchers interested in the implications of commitment for employee well-being to pay closer attention to interactions among the components of commitment and/or to examine differences across commitment profiles. The findings of the few existing profile studies (Somers, 2009; Wasti, 2005), and the propositions offered here, should provide guidance for profile comparisons involving employee well-being.

### Conclusions and practical implications

There is a large body of research demonstrating the benefits of commitment for employers. The results of the research reviewed here suggest that commitment can also have benefits for employees, making it a potential win-win situation. Again, however, the nature of the commitment matters, with AC having the most positive consequences for employees just as it does for employers.

Given what is known about the effects of workplace stressors on employee health and well-being, one of the most important things managers can do to improve well-being is to find ways to reduce the existence of these stressors. We recognize, however, that this is usually easier said than done. The research findings reviewed here lead us to believe that employees who have strong AC may be better able to withstand stressors, provided that those stressors do not directly undermine commitment or the mechanisms implicated in its positive health effects (i.e., need satisfaction and autonomous regulation). Moreover, preliminary evidence suggests that strong AC is associated with more than simply the absence of illness – it also relates positively to engagement (Hallberg & Schaufeli, 2006) and positive psychological capital (Luthans et al., 2008) which are arguably indicators of eudaimonic well-being. Thus, managers can presumably both prevent illness and foster well-being by boosting positive forms of commitment.

Another consistent finding to emerge from our review is a negative association between CC and employee well-being. In light of these findings, organizations should avoid practices that contribute to the development of CC in its pure form. While few organizations may do this intentionally, they might do so inadvertently by introducing programs designed to encourage retention (e.g., retention bonuses) without addressing quality of work life issues. This can create a conflict for employees who would like to escape from the undesirable working conditions but are reluctant to incur the economic costs. We recommend that such retention strategies be reconsidered in light of the findings we have reviewed and the propositions we have offered, and that quality of work life be considered an essential component of retention strategies.

Research concerning the implications of NC is scarce, and the findings are inconsistent. As we noted earlier, this inconsistency may be due to the dual nature of NC. Obligations can be experienced as a moral imperative when combined with strong AC and as a sense of binding indebtedness when combined with strong CC and weak AC (Gellatly et al., 2006; Meyer & Parfyonova, 2010). We expect that both organizations and employees will benefit more in terms of productivity and well-being from practices intended to foster a moral imperative mindset than from those that create indebted obligation. However, this is an issue that needs more research before firm conclusions can be reached.

Although there are exceptions (e.g., Siu, 2002; Tan & Akhtar, 1998; Wasti, 2005), most research pertaining to commitment and well-being has been conducted in the Western world. For the most part, the findings obtained in other cultures are not easily distinguished from those of Western studies. Perhaps the most notable exception was the study by Tan and Akhtar (1998), where AC and NC were found to relate differently in a Chinese context. In any case, there has yet to be a systematic investigation of potential culture differences in the relation between commitment and well-being, and this is another important direction for research. Until such an analysis is conducted, caution must be exercised in the generalization of current findings.

Finally, we acknowledge that in today's dynamic world of work it may not be possible for organizations to create long-term AC to the organization itself (Baruch, 1998; Cappelli, 1999). Even if this is true, research has demonstrated that AC to other foci (e.g., teams, occupations, customers) relates positively to outcomes of importance to organizations such as retention (e.g., Stinglhamber, Bentein, & Vandenberghe, 2002), performance (e.g., Becker, Billings, Eveleth, & Gilbert, 1996; Vandenberghe, Bentein, & Stinglhamber, 2004), OCB (e.g., Becker & Kernan, 2003; Cohen, 2007), and customer satisfaction (e.g., Siders et al., 2000; Vandenberghe et al., 2007). Our review provided some evidence that AC to one's career or occupation can have positive implications for employee health and well-being much like AC to the organization (e.g., Cohen, 1998; Miller et al., 1990; Yeh et al., 2007). Thus, all may not be lost if fostering AC and NC to the organization is difficult or impossible. Performance and health benefits might still be achieved by fostering commitment to other foci with compatible goals (Meyer, 2009). Again, however, much more research on commitments to these other foci is required to fully understand their implications for organizations and their employees. We hope that our review and our conceptual model help to stimulate and guide this research.

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