Lightening the Dark of Employee Commitment: Refined Investigations into Debated Commitment Associations

Dissertation

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ABSTRACT

The present research investigates three current debates in commitment research. In order to contribute to these debates and to provide novel insights, the present research consistently applies a differentiated multi-target approach by distinguishing between employees' commitments to the organization and their commitments to its constituents top management, supervisors, and workgroups. In addition, it considers recent developments in the conceptual refinement of commitment and consistently aims to strongly build on established basic theoretical foundations of social psychology as well as on incorporating methodological advancements. The first study investigated the debated relationship between values and commitment. Specifically, it compared the relevance of employee values, commitment target values, and of their congruence for employee's multiple commitments. Results indicate that targets' values are most important for commitment, especially the targets' people-centered values. In contrast, value congruence between targets and employees appears to play a less important role than implied in much previous research. The second study investigated the debated relationship between commitments and employees' readiness for change. Again applying a multi-target perspective, results showed that the association was only positive when the different commitment targets were perceived to advocate changes. If the target's change advocacy was low, the association between commitment and change readiness disappeared or even turned negative. Finally, the third study investigated the debated relationship between global commitment to the organization and specific commitments to its constituents. This research question again implied the use of a multi-target perspective and was investigated in a multi-cohort cross-lagged panel design to understand the influences between commitments. Results indicate that global commitment influences the specific commitments of low-tenured employees; however, in medium- and high-tenured employees the different commitments grow independent of each other. Taken together, the studies demonstrate that reassessing the debated associations with higher differentiation and a multi-target perspective can contribute to explaining the mixed findings in previous research. Moreover, moderations and conditions identified in the present research shed more light onto the processes that underlie commitment development and effects. Most importantly, the present research strongly encourages researchers and practitioners to consider the multiple targets of commitment and their values and goals in order to better understand and manage employee commitment.

Keywords: Commitment, organizational commitment, commitment targets, specific commitments, commitment concept, values, value congruence, change readiness

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1. Introduction

1.1. General introduction

Commitment is one of the most prominent psychological constructs in the field of work and organizational psychology (Van Steenbergen & Ellemers, 2009). Employees who commit to the organization or to a target within the organization form a unique bond with this target, characterized by a willingness to dedicate themselves to and take on responsibility for the target with whom the bond is formed (Klein, Molloy, & Brinsfield, 2012). Commitment provides a wide range of benefits for organizations, spanning increased attendance, lower turnover, limited tardiness, increased citizenship behavior, and better job performance (Mowday, Steers, & Porter, 1979; Randall, 1990; Riketta, 2002; Vandenberghe, Bentein, & Stinglhamber, 2004). This puts organizations with a committed workforce at a substantial advantage and makes commitment the focus of attention for many researchers and practitioners (Battistelli, Galletta, Portoghese, & Vandenberghe, 2013). But despite the pronounced research interest, a lot of open questions still surround employee commitment. In fact, recent research developments have come to severely question several longstanding beliefs on commitment antecedents and consequences (cf., Klein et al., 2012). This is particularly noteworthy because some of these questioned beliefs concern fundamental explanations for how commitment develops and affects employee behavior. As a consequence, several associations of commitment with its proposed antecedents and consequences are now in need for reassessment and refined investigation.

Against this background, the present research sets out to lighten the dark of commitment associations by advancing the debates that surround its relations with antecedents and consequences. Theoretical work and meta-analyses concluded that a main reason for the contradictions in commitment research lies within the conceptualizations of the commitment construct itself (e.g., Cohen, 1993; Mathieu & Zajac, 1990; Randall, 1990). This conclusion suggests two consecutive steps in order to advance commitment research: First, conceptual research needed to provide a clearer and more precise commitment construct. Then second, empirical research needed to use the refined concept for refined investigations into the debated commitment associations. Fortunately, conceptual commitment research now provides answers to the main concerns about the commitment concept (Klein et al., 2012), so that the present research can draw on them to undertake the second step and advance debates by means of refined investigations.

In particular, the present refined investigations are based on two conceptual developments that addressed two major concerns. First, commitment conceptualizations were often too general (Becker, 1992; Meyer & Herscovitch, 2001). Specifically, most research investigated commitment to the organization as an abstract entity. However, organizations, from the perspective of an employee, are not just abstract entities, but comprised of people and groups (Reichers, 1985). A growing amount of research

demonstrates that this is reflected in employee commitment, so that it is accurately modelled as a collection of commitments to the organization and to its constituents (cf., Klein et al., 2012; Reichers, 1985). Accordingly, the present research particularly emphasizes a multi-target perspective on employee commitment to adequately reflect the unique bonds employees form in the multi-facetted settings of organizations.

As the second paramount issue, commitment conceptualizations were criticized for being too wide, making commitment a “stretched construct” that severely overlaps with supposedly related constructs (Klein et al., 2012, p. 130). Such overlap between commitment and its assumed antecedents and consequences hindered research from reliably assessing commitment’s actual associations with these constructs (cf., Brannick, Chan, Conway, Lance, & Spector, 2010). Consequently, the present research employs the commitment concept by Klein et al. (2012), which was refined for “parsimoniously capturing the distinctiveness of the construct and differentiating commitment from other constructs” (p. 131), to more precisely and accurately examine the relationship between commitment and its antecedents and consequences.

In addition to these two conceptual developments, the present research also incorporates theoretical foundations as a third refinement to advance debates. Specifically, the studies presented in this research tie commitment’s associations with antecedents and consequences to established theories from social and organizational psychology. These theories should help to understand the underlying principles of commitment associations and to provide explanations for the mixed findings in previous research.

Fourth and finally, the present research also draws on refined methods in study design and analyses to further contribute to deeper insights into the debated associations.

With these refinements, the present research addresses three commitment associations that are particularly affected by the recent developments and debated due to mixed findings. In order to be comprehensive, each of these debated associations represents a different directional perspective, with one debate over a commitment antecedent, one over a commitment consequence, and one over associations within the commitment concept.

The first debate is concerned with values and value congruence as antecedents of commitment. Value congruence was deemed so fundamental for commitment that it has been included in many commitment conceptualizations and measures (e.g., Mowday et al., 1979; O'Reilly & Chatman, 1986). However, recent research has already cast doubts on this proposition, as studies with improved methodology ceased to support the expected strong link between value congruence and commitment (e.g., Kalliath, Bluedorn, & Strube, 1999; Ostroff, Shin, & Kinicki, 2005). And with the added precision of the multi-target perspective, and particularly with the removal of confounded constructs from the commitment conceptualization (among them value congruence), this belief now awaits further differentiated empirical reassessments to determine whether value congruence is indeed so central for commitment.

The second debate is concerned with change readiness as a consequence of commitment. Although most commitment researchers regard commitment as a resource for organizational change, others proposed that commitment had to be reduced in order to allow for change (cf., Madsen, Miller, & John, 2005). Empirical findings have been too scarce and too mixed to draw a conclusion (Kwahk & Kim, 2008; Madsen et al., 2005). Based on established theories and the higher differentiations from the two conceptual developments, the present research proposes and tests a moderation effect as the root cause for this ambivalence. This moderation model seeks to identify the conditions for positive or negative effects of commitment on change readiness, and could also serve as a starting point for better understanding commitment effects on other employee outcomes.

The third debate is concerned with the influences between employees' global commitment to the organization and their specific commitments to organizational constituents. This debate is characterized by two opposing ideas: Models of top-down influences suggest that global commitment to the organization is the first commitment to develop and precedes commitment to any target within the organization (Vandenberghe, Bentein, & Panaccio, 2014). In contrast, models of bottom-up influences suggest that the specific commitments to organizational constituents instead join to influence global commitment to the encompassing organization (Hunt & Morgan, 1994; Yoon, Baker, & Ko, 1994). The present research builds on the recent refinements and established theories to not only extend the first cross-lagged research in this debate (i.e., Vandenberghe et al., 2014), but also to develop a model of how multi-target commitment develops with increasing employee tenure.

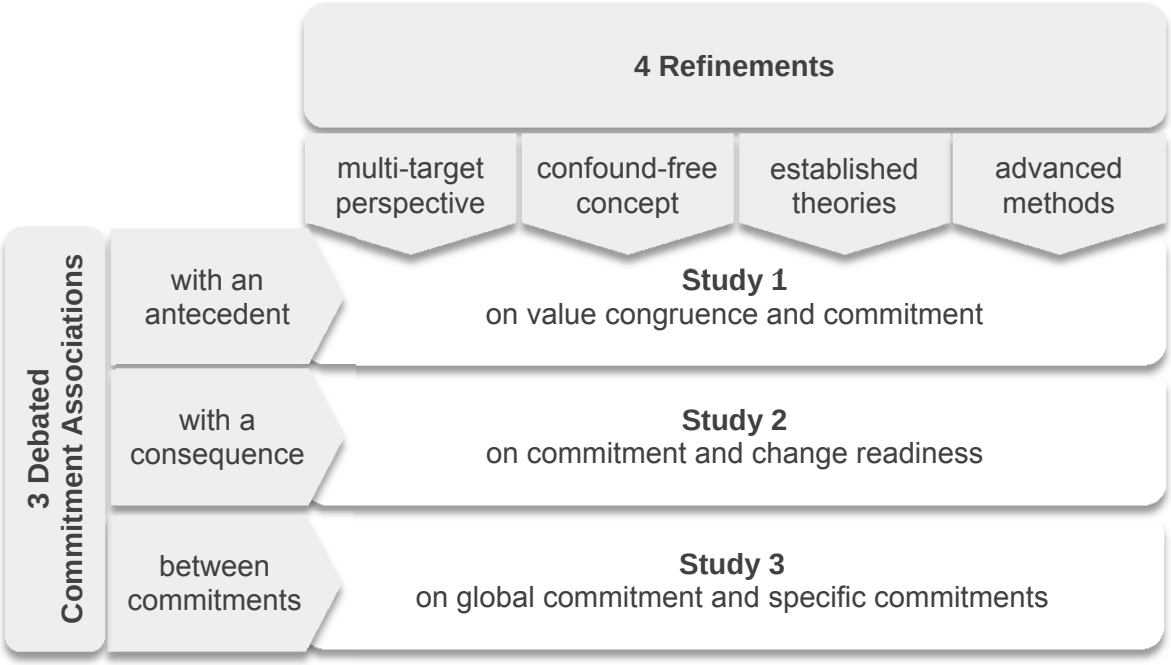

Figure 1. The refinements-debates-structure of the present research

Overall, by combination of refined investigations into the three debates, the present research aims to substantially advance the current understanding of employee commitment. Summing up, it lightens the dark of commitment associations by employing four refinements to commitment research: 1) It consistently employs the multi-target perspective which better reflects the complexity of employee commitment, 2) uses a confound-free conceptualization of commitment for more accurate results, and combines these conceptual improvements with 3) ties to established theories and 4) advanced methodology and analyses. The present research applies these refinements to three debates which represent examples for three directional perspectives: commitment associations with 1) its antecedents (value congruence), 2) with its consequences (change readiness), and 3) associations within commitment (influences between global and specific commitments). Based on the combination of these studies (Figure 1), the present research aims to draw improved conclusions about commitment's associations, identify conditions that may account for variations in their strengths and directions, and ultimately gain a better understanding of commitment and satisfy the demand for more reliable and specific practical advice.

1.2. Conceptual developments in commitment research

With its high relevance for organizational success (Chew & Entrekin, 2011), commitment has attracted and continues to attract great interest from a wide array of researchers and fields. Accordingly, reports and suggestions about numerous potential antecedents and consequences grew quickly over the course of its research history (Cohen, 1993; Mathieu & Zajac, 1990; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Riketta, 2002)—however, so did calls for a more stringent and precise conceptualization, and for adopting conceptual advancements into empirical work (e.g., Jaros, 1997; Meyer & Allen, 1991; Swailes, 2002). Two fundamental conceptual developments appear especially promising to promote greater clarity and precision in commitment research, and particularly to improve our understanding of commitment associations: The study of commitment as a multi-target construct, and a confound-free conceptualization of commitment that clearly distinguishes it from related concepts.

1.2.1. Taking a multi-target perspective on commitment

The idea that employees' commitment is more adequately understood as a multi-target construct has been around the commitment literature for decades. It likely was most prominently promoted by Reichers in 1985. She pointed out that commitment theorists and researchers treated organizations "as unitary 'wholes'" (p. 470) when they spoke of one organizational commitment of employees. As Reichers (1985) showed, this unitary view stood in contrast to organization theory. Specifically, organization theory emphasized that organizations were not uniform abstract entities but rather coalitions of constituencies with different interests and characteristics (Cyert & March, 1963; Goodman & Pennings, 1979). Aiming to enrich commitment research by integrating these ideas, Reichers (1985) proposed "that the concept of commitment should be

refined to reflect this multi-faceted conception of organizations" (p. 470). Accordingly, she suggested conceptualizing commitment as a multi-target construct. More precisely, employee commitment should be conceptualized as consisting of a global commitment to the organization as a whole and multiple specific commitments to its constituents (Reichers, 1985; Figure 2).

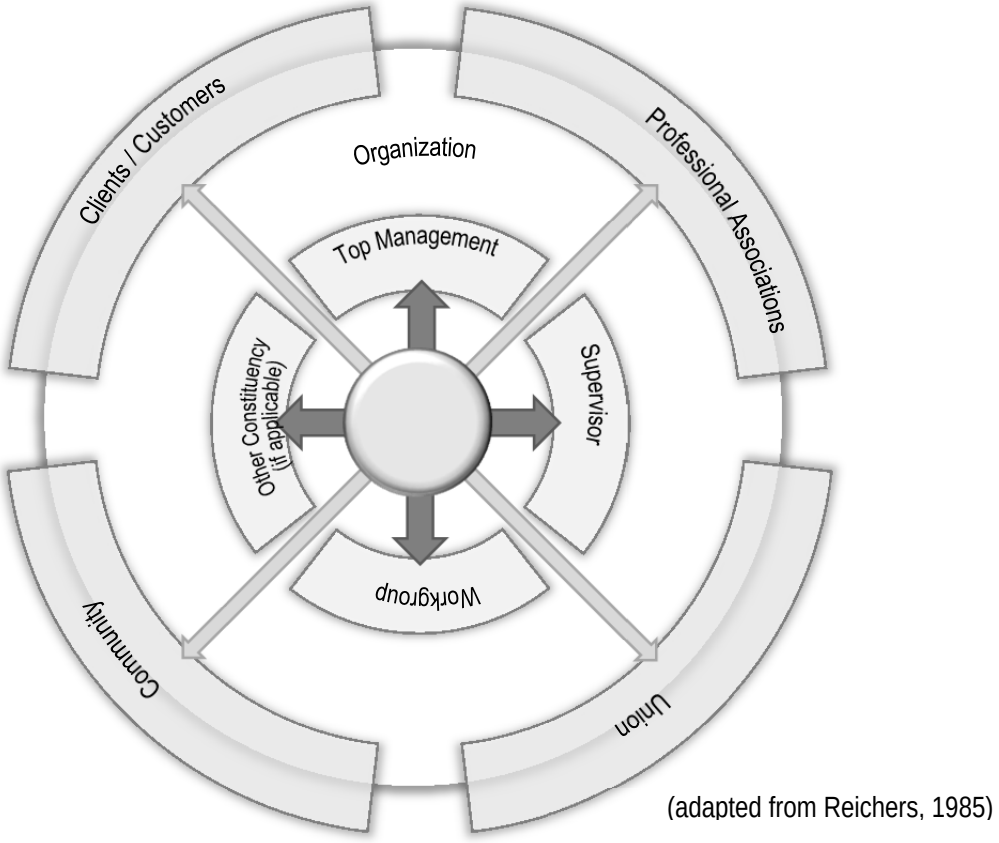

Figure 2. Model of employees' commitments following Reichers (1985)

A number of researchers followed Reichers' (1985) suggestions. They indeed found important differences in how the diverse global and specific commitments related to antecedents and consequences (e.g., Becker & Kernan, 2003; Bentein, Stinglhamber, & Vandenberghe, 2002; Riketta & van Dick, 2005; Stinglhamber & Vandenberghe, 2003). Accordingly, the multi-target approach appears both to be more meaningful and to provide deeper empirical insights.

Nevertheless, the majority of studies into commitment associations continued to focus on organizational commitment alone, based on the traditional commitment conceptualizations and measures that did not account for the multi-target nature of commitment and were not easily adaptable to multi-target investigations (cf., Klein et al., 2012; Meyer & Herscovitch, 2001). In particular, researchers were reluctant to assess commitment as a multi-target construct because doing so is more complex (Dunham, Grube, & Castañeda, 1994), enlarges the total number of items presented to respondents (Meyer & Herscovitch, 2001), and even required writing completely new scales (Klein et al., 2012).

Due to this discrepancy between the strong arguments for a multi-target perspective on the one hand, and its reluctant adoption in empirical research on the other, much remains to be learned about commitment associations from conducting multi-target research (Becker & Billings, 1993; Carmeli & Gefen, 2005; Meyer, Allen, & Smith, 1993; Riketta & van Dick, 2005). In particular, multi-target commitment research essentially provides three key advantages for the study of commitment associations:

First, it clearly specifies the commitment target towards respondents. Following organization theory, employees may have different conceptions of what the organization is and who represents it toward them (cf., Reichers, 1985). Accordingly, employees answering the same questions on abstract organizational commitment may refer to different targets, so that some employees indicate their bonds with the overall organization while others indicate their bonds with top management, supervisors, or the workgroup. Multi-target studies which clearly name and distinguish the different relevant constituencies that function as commitment targets remove this potential source for inconsistencies (Czaja, 1999).

Second, multi-target commitment research allows insights into the generalizability of associations. Previous multi-target research has demonstrated that some associations appear to be generalizable across commitments, whereas others uniquely pertain to certain targets. For example, organizational citizenship was reported to associate with all commitments in the respective studies (i.e., commitment to organization, supervisor, and team; e.g., Bishop & Scott, 2000; Cheng, Jiang, & Riley, 2003), whereas the association with performance appears to be unique for commitment to proximate targets, that is, to supervisors and workgroups (Bishop, Scott, & Burroughs, 2000; Cheng et al., 2003; Ellemers, de Gilder, & van den Heuvel, 1998; Van Steenbergen & Ellemers, 2009). Accordingly, multi-target studies can show whether finding support for an expected association may depend on the commitment target which is studied. Hence, they can contribute to resolving inconsistencies in commitment research caused by a focus on different targets and can indicate the extent to which an association generalizes across commitments.

Third, multi-target commitment research provides a more detailed and complete picture of commitment associations. Research that focuses on global commitment to the organization alone unveils but one part of commitment associations. Therefore, it risks missing out of identifying the potentially different effects of other relevant commitments, and might draw premature conclusions (cf., Reichers, 1985). In fact, previous research and meta-analyses suggest that these other specific commitments might often be even more relevant to the association in question than global commitment to the organization (Bishop et al., 2000; Ellemers et al., 1998; Mathieu & Zajac, 1990; Riketta & van Dick, 2005; Van Steenbergen & Ellemers, 2009). Consequently, multi-target research not only allows to more fully reflect the associations of employee commitment (Becker & Billings, 1993; Cohen, 1993; Meyer, Allen, & Topolnytsky, 1998), but also to identify which commitment is most relevant for the association in question and accordingly derive more specific advice for managing employee commitment and its effects (Dunham et al., 1994; Siders, George, & Dharwadkar, 2001).

1.2.2. Removing confounds from the commitment concept

Driven by practical interest, early commitment research especially focused on "the conditions in which commitment existed, factors leading to commitment, and indicators of commitment" (Klein et al., 2012, p. 131). Also, many early commitment researchers were most interested in commitment as an effective lever to reducing employee turnover (Klein et al., 2012). Therefore, most research, both theoretical and empirical research, was devoted to commitment antecedents, its indicators, and its effects on turnover. This interest shaped early commitment conceptualizations, with strong influences on subsequent research: Researchers continuously enriched the commitment concept and definitions with their gained knowledge on antecedents, consequences, and proposed explanations of underlying processes. For example, researchers proposed that commitment was based on or equal to identification with the organization and internalization of its goals and values (e.g., Mowday et al., 1979; O'Reilly & Chatman, 1986; Reichers, 1985). As a result, shared values between the employee and the organization were added to the concept and were regarded as indicating commitment (Mowday et al., 1979; O'Reilly & Chatman, 1986). Equally, commitment was proposed to bind employees to their current organization; and consequently, intent to stay with the organization was also included into the concept and considered an indicator of commitment (e.g., Allen & Meyer, 1990). The diverse additions were brought together in inclusive reconceptualizations, which increasingly extended the commitment concept to incorporate the identified or proposed associations (Meyer & Allen, 1991; Meyer & Herscovitch, 2001). As a consequence, the commitment concept considerably broadened over the course of accumulating research (Klein et al., 2012).

The downside of this development was that it became increasingly difficult to distinguish commitment from related constructs (Le, Schmidt, Harter, & Lauver, 2010). And this, in turn, resulted in two main reasons for the current uncertainties about commitment associations:

On the one hand, empirical commitment research became increasingly fragmented (Klein, Becker, & Meyer, 2009), as researchers chose different ways to respond to the challenge of indistinct concepts and measures: Whereas some researchers drew onto previous, less inclusive conceptualizations, others chose to focus on single components of inclusive commitment concepts (such as focusing solely on one or two dimensions of the three-component model of commitment by Meyer & Allen, 1991; e.g., Swailes, 2004). The resulting growing variety in commitment conceptualizations and measures was accompanied by an equally growing inconsistency in research results (Cohen, 1993; Swailes, 2002). These inconsistencies pose great challenges to integrating previous results and to drawing conclusions about commitment associations from the literature (Swailes, 2002).

On the other hand, the second reason for uncertainties in commitment research is that the indistinct conceptualizations may have biased empirical results. Many commitment researchers have pointed out that commitment concepts overlap with its suggested antecedents and outcomes (Allen & Meyer, 1990; Bozeman & Perrewé, 2001; Jaros, 1997; O'Reilly & Chatman, 1986). However, reliable empirical tests of these

associations require that commitment and its antecedents and consequences are assessed without conceptual and measurement overlap. Otherwise, it is unclear whether the reported associations actually reflect a connection between commitment and the respective antecedent or consequence, or whether they rather reflect the overlap between their measures (Brannick et al., 2010; Conway & Lance, 2010). This concern additionally questions the conclusions about commitment associations drawn from previous research, which "may not warrant the confidence they have been given" (Klein et al., 2012, p. 131).

Consequently, there has been an increasing call for refined empirical tests to better understand these associations, their strengths, and their conditions. In response to this call, Klein et al. (2012) offered a major reconceptualization of commitment. Most importantly, they adopted a selective approach and examined prior commitment conceptualizations for confounded constructs. Any identified confounds were removed to eventually obtain a commitment conceptualization that was precise and included only "the necessary and sufficient conditions for commitment" (Klein et al., 2012, p.137). As a result, the refined concept includes only the three characteristics that make commitment a unique type of bond: 1) volition, that is, commitment is the result of a conscious choice and employees are aware of being committed; 2) dedication to the target; and 3) responsibility for the target (Klein et al., 2012). Commitment is therefore clearly differentiated from other kinds of bonds, such as identification which requires that employees psychologically merge with the target (Ashforth & Mael, 1989), and also contains no references to assumed antecedents, such as value congruence (e.g., O'Reilly & Chatman, 1986), or outcomes, such as intention to maintain membership in the organization or willingness to pursue the target's goals (e.g., Mowday et al., 1979). Figure 3 displays concepts that were included within former commitment concepts and measures contrasted against Klein et al.'s (2012) distinct reconceptualization.

This conceptual refinement presents new opportunities to significantly progress our understanding of commitment associations. First and foremost, it allows reassessing those associations that may have been obscured by conceptual overlap. Specifically, the truly distinct conceptualization can serve as a basis for confound-free measures of commitment on the one hand, and of its antecedents and consequences on the other. Such more precise studies into the questioned associations may show whether some previous convictions need to be reinterpreted because they have been biased by conceptual difficulties. In any case, commitment studies with distinct measures will provide for drawing conclusions with much greater confidence (Klein et al., 2012).

Beyond that, however, and much more exciting for promoting our understanding of commitment, the confound-free concept opens up the way to investigating deeper into the processes that lead to commitment, and into the processes of how commitment benefits organizations. Specifically, previously confounded concepts are now conceptually separated from commitment, which allows studying them as discrete factors that influence commitment and its associations. Thereby, this conceptual refinement has laid the foundation for actually understanding the roles played by formerly confounded concepts such as value congruence or the target's goals, which allegedly are closely tied

to commitment and may impact how it forms and affects employee outcomes. By hence opening up new research opportunities, the confound-free reconceptualization can help research to further examine the principles that underlie commitment associations.

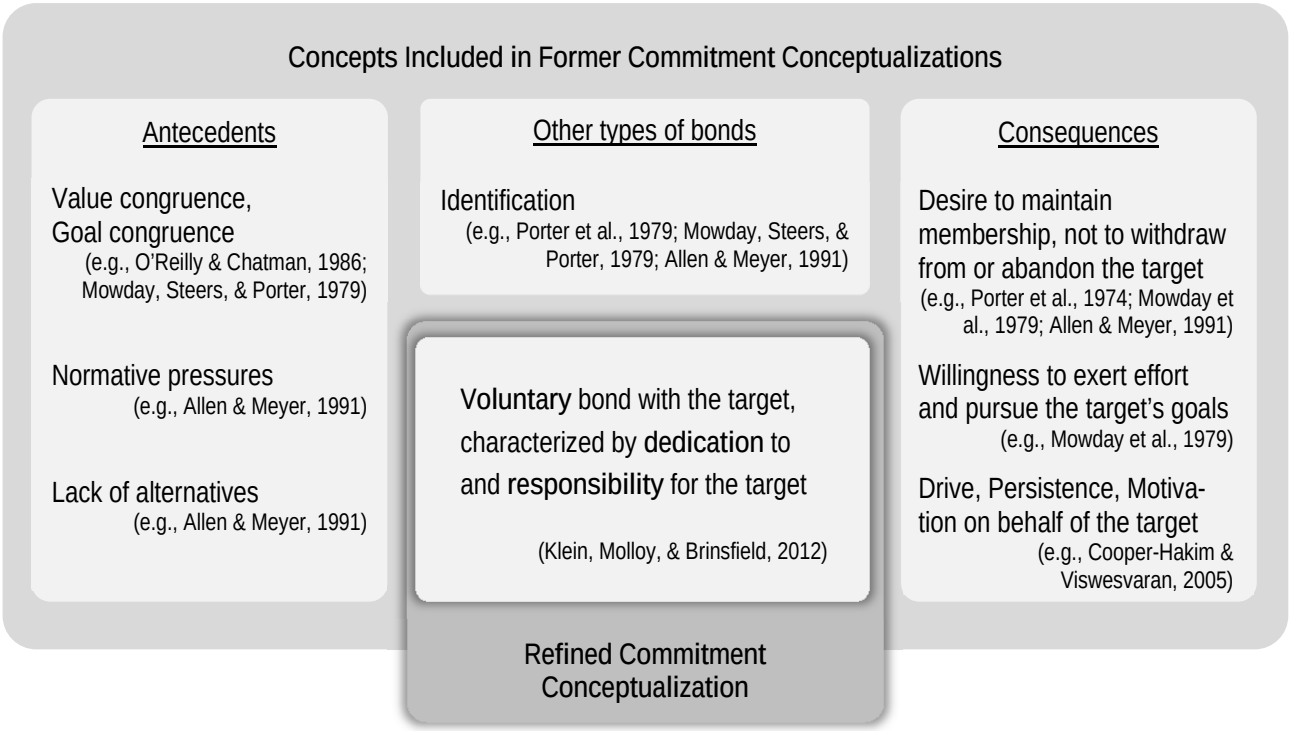

Figure 3. Confounds removed from the commitment concept

1.3. Current debates on associations with and within commitment

The developments in commitment conceptualizations and the inconsistent findings in previous research have led to intense debates in commitment research (Klein et al., 2012). The present research puts three debated commitment associations to the test by employing the two conceptual developments (i.e., the multi-target perspective and the confound-free reconceptualization) and combining them with enhanced theoretical backgrounds and research methods. The three debates that were selected are characterized by a remarkable discrepancy: On the one hand, the associations that they concern have been very commonly proposed within commitment research. Moreover, they have served to explain how commitment develops and contributes to organizational success, and form the basis for current organizational practices in employee recruitment, socialization, and change management (Mathieu & Zajac, 1990; Swailes, 2002; Vandenberghe et al., 2004). But on the other hand, this stands opposed to lacking or unclear empirical support (Riketta, 2002; Riketta & van Dick, 2005). Therefore, these debates are particularly relevant to commitment theory and practice.

1.3.1. The debate over value congruence as an antecedent of commitment

One of the most common confounds within commitment concepts is value sharing, or value congruence (Klein et al., 2012). In fact, commitment and value congruence have even been used interchangeably in the literature (Jaros, 1997). And employees who reported value congruence, that is, who reported endorsing values to the same extents as their commitment targets (O'Reilly, Chatman, & Caldwell, 1991), were automatically considered as committed by popular commitment measures (e.g., OCQ by Mowday et al., 1979). Researchers argued that value congruence contributed to commitment because it improved interactions between employees and their commitment targets. Specifically, employees and targets who held the same values, thus had the same beliefs about how an individual ought to behave (Ravlin & Meglino, 1987), should collaborate more easily, experience fewer conflicts, and as a consequence should more readily form the commitment bond (Ostroff et al., 2005). In line with these arguments, studies found that employees were more committed to targets when their value profiles were more similar to the value profiles of the targets (Kristof-Brown, Zimmerman, & Johnson, 2005).

Against this long-standing belief in commitment research, it came as a huge surprise when new research methods allowed more precise studies which largely ceased to support congruence effects (Edwards & Parry, 1993; Kalliath et al., 1999; Kristof-Brown et al., 2005). Inspired by the new methods and the upstirring debate, several studies followed up on the first findings using the advanced analyses (e.g., Finegan, 2000; Ostroff et al., 2005). Their results continued to question whether value congruence was as important for commitment as had been assumed. Instead, it seemed that the previously ignored absolute levels of value endorsement by employees and by the targets may deserve more attention. However, at the same time, results were also rather inconsistent across studies and even within the studies. Hence, a long-standing traditional belief now stands challenged by new results; but as these results are ambiguous, the debate over value congruence's role for commitment remains unsettled.

At this point, introducing the two conceptual developments may constitute a significant step forward for the debate. First, more recent findings have already shown that higher differentiations provide meaningful additional insights into the effects of values and value congruence on commitment. This became especially apparent when Ostroff et al. (2005) differentiated between the organization, managers, and workgroups as sources of values and found different effects for each of them. Interestingly, however, this was not matched by the same differentiations on the side of commitment, but Ostroff et al. (2005) investigated the effects of these different targets' values on commitment to the overall organization alone. Therefore, additionally applying the multi-target perspective on commitment with its differentiation between commitments to the organization, supervisors, and workgroups is the logical next step to further deepen our understanding of value congruence's role for commitment. Second, against the traditionally extensive conceptual overlap between commitment and value congruence, the confound-free conceptualization appears especially promising for advancing this debate. Some of the studies which challenged value congruence's role for commitment

relied on items that assessed value sharing in order to measure commitment (e.g., Kalliath et al., 1999). Consequently, their results may still overestimate value congruence's role, calling for reassessments with distinct measures. Accordingly, the first study within the present research uses the multi-target perspective and the confound-free reconceptualization to advance the debate over value congruence's effects on commitment.

1.3.2. The debate over change readiness as a consequence of commitment

Commitment's many positive effects on employee behavior can notably contribute to an organization's current success (Riketta & van Dick, 2005). Beyond that, many have proposed that commitment also contributes to making the organization fit for the future, by facilitating organizational change (e.g., Armenakis, Harris, & Mossholder, 1993; Eby, Adams, Russell, & Gaby, 2000). In particular, commitment arguably helps with the people side of organizational change, because committed employees are willing to engage in extra effort for the organization (Mayer & Schoorman, 1992; Riketta, 2002). As a result, commitment arguably increases employees' change readiness, so that they are more ready to accept and assist with organizational change implementation (Armenakis et al., 1993; Eby et al., 2000; Katz & Kahn, 1978). However, some practices in change management follow a perfectly opposed line of thought. Specifically, Lewin's (1947) influential model of three change phases states that change implementation must start with a phase of "unfreezing" the organization, to loosen the ties to the past and make room for changes. Reportedly, some organizations therefore actively take measures which reduce employee commitment in preparation for a change (Madsen et al., 2005). Very little research has investigated whether commitment positively or negatively affects change readiness, and the scarce findings are unclear about the strength of this association (Kwahk & Kim, 2008; Madsen et al., 2005; Oreg, Vakola, & Armenakis, 2011). Therefore, the question remains whether organizations can draw on commitment as a resource for change or whether it might in fact act as a hindrance.

The two conceptual developments in commitment research may help to resolve this debate. In particular, the multi-target perspective enables research to consider differences between targets that may influence the association between commitment and change readiness. On the one hand, the different targets of employee commitment each have unique roles during change initiatives (Eby et al., 2000; Hanpachern, Morgan, & Griego, 1998). Therefore, commitments to some targets may be more relevant for change readiness than commitments to other targets. On the other hand, the different targets of commitment may react to organizational changes in different ways, so that some targets advocate changes while others do not. Previous confounds that have been removed from the commitment concept suggest that these different reactions of targets could influence how commitment affects change readiness (cf., Klein et al., 2012). Insights into such differences could explain some of the ambiguity in previous findings. Moreover, they would provide practical advice on how commitment interventions can contribute to successful change. Accordingly, the second study within the present

research uses the multi-target perspective and the confound-free reconceptualization to advance the debate over commitment's effects on change readiness.

1.3.3. The debate over influences between global and specific commitment

The finding that employees hold multiple commitments to different targets not only allows deeper insights into commitment associations with other constructs, but also raised new questions on its own. Most fundamentally, multi-target commitment theory needs to specify and explain whether the different commitments interrelate, and if so, what the directions and strengths of these interrelations are. There is large consent in the literature that employees' global commitment to the organization and their specific commitments to organizational constituents influence each other, because the targets of specific commitments are nested within the organization (Bentein et al., 2002; Meyer & Allen, 1997; Reichers, 1985). In contrast, researchers dissent on the direction of these influences. And they have in fact offered fundamentally opposed models. These models range from viewing global commitment as a necessary precursor for specific commitments (Vandenberghe et al., 2014) to viewing global commitment as the result of accumulated specific commitments (Hunt & Morgan, 1994; Reichers, 1985); and from suggesting that commitments contribute to each other to suggesting that they instead stand in conflict with one another (cf., Klein et al., 2012). At present, this debate particularly focuses on the question whether specific commitment originates from global commitment (top-down), or whether the influences follow the reverse direction so that specific commitment influences global commitment to the encompassing organization (bottom-up). This is because previous research reported empirical support for bottom-up models (Hunt & Morgan, 1994; Yoon et al., 1994). However, these studies built on cross-sectional data. Now recently, a first cross-lagged study found the reverse: It completely rejected the bottom-up influences from specific on global commitment, and instead supported top-down influences (Vandenberghe et al., 2014). However, it studied only one specific commitment, namely commitment to the supervisor. The influences on other specific commitments, for example, to top management or workgroups, have not yet been investigated in cross-lagged panel designs. Therefore, the central question about the influences between global commitment on the one hand, and the multiple specific commitments on the other remains largely unanswered.

The two conceptual developments should help to advance this third debate, too. Specifically, a more complete adoption of the multi-target perspective in cross-lagged panel studies would show whether the multiple specific commitments are all subject to top-down influences. This would allow determining whether the influences between global and specific commitments follow a general direction and could lead toward a comprehensive model of the influences between commitments. At the same time, a confound-free conceptualization of these multiple commitments ensures that such research assesses the influences between commitments rather than those between their confounds. Accordingly, the third study within the present research uses the multi-target perspective and the confound-free conceptualization to advance the debate over influences between global and specific commitments.

2. The present research

2.1. Overview

The present research consists of three empirical studies. As laid out in the introduction, the three studies share a common base and pursue a common goal: Building on to conceptual developments, links to established theories, and advanced methods, they conjointly aim to promote commitment theory and inform organizational practice by providing refined insights into debated commitment associations. Taking a comprehensive approach, the studies investigate into one debate each from the fields of commitment antecedents (Study 1), commitment consequences (Study 2), and from influences within multi-target commitment (Study 3). Each of these debates concerns an association that is especially relevant for commitment theory and practice and that can be particularly advanced by refined investigations.

The first study takes on the antecedent perspective. Within this perspective, it focuses on the debated association between value congruence and commitment. The core question about this association is whether value congruence is or is not a fundamental basis for commitment, and whether the value *levels* of employees and commitment targets may be more relevant for commitment than the *congruence* between their values (e.g., Kalliath et al., 1999). Study 1 takes a new approach to this question by making two important differentiations. First, it distinguishes between the organization, supervisor, and workgroup both as commitment targets and as value sources. That is, the study investigates how the values of the employee and the values of a particular commitment target work together to affect commitment specifically to that target. This design reflects that employees perceive different values from the organization, the supervisor, and their workgroup, and also form unique commitments with each of these targets (Becker, 1992; Oh et al., 2014). Therefore, it more adequately represents the associations between values and commitment in organizations to provide deeper and more accurate insights. As the second differentiation, the study differentiates between the effects of seven different values, as well as between the effects of congruence on each of them. Therefore, it can identify how the association between values and commitment differs depending on the value content.

With this double differentiation design, the first study seeks to answer the question whether value congruence is central for commitment. Its most important contribution could be to identify that there is no general answer to this question. But that the association between values and commitment depends on the target or on the value content. In this case, the study could trace back the diverging findings in previous studies to differences in which value dimensions they measured and from whom. Additionally, the insights into differences across values or targets could inspire theories on the processes that link values to commitment. Finally, the study aims to provide advice on whether research and practice should focus less on seeking value congruence, and on which values they should be looking for instead in order to achieve a committed workforce.

The second study takes on the consequence perspective. Within this perspective, it focuses on the debated association between commitment and change readiness. The different views in this debate regard commitment as a resource, or instead as a hindrance to change readiness (cf., Madsen et al., 2005). The second study in this research proposes that commitment's effect on change readiness in fact varies. In particular, it proposes that whether commitment increases change readiness depends on the commitment target. More specifically, previous confounds in commitment concepts suggest that committed employees strive for the target's goals (e.g., Mowday et al., 1979). This suggests that commitment especially affects outcomes when they concord with the target's goals. In the context of organizational change, this means that commitment may especially contribute to employee change readiness when employees believe that change is their target's goal.

Consequently, the second study investigates whether *the commitment target's perceived change advocacy* moderates the association between commitment and employee change readiness. Particularly, the study tests whether committed employees are more ready to change when they perceive that their commitment target advocates change. Following the multi-target approach to commitment, the study investigates this moderation for commitments to the three groups within organizations who are most prominent and can act as inadvertent change agents during organizational change: top management, supervisors, and workgroups (cf., Eby et al., 2000; Oreg et al., 2011).

With this approach, the study makes important contributions to theory and practice because it is the first to test the debated association with change readiness for commitments to organizational constituents (cf., Oreg et al., 2011). Moreover, it provides a first model and empirical test of the role that commitment target's goals play in commitment's associations with its consequences. Thereby, its results could serve as a hint for future research as to whether target's goals (and perceptions thereof) may deserve more attention in research on commitment effects in the workplace. Results should also be valuable for practice, as they inform about how commitment to the different targets and these targets' change advocacies may be fruitfully incorporated in preparing organizations for successful change.

The third study takes on the internal influences perspective. Within this perspective, it focuses on the debated influences between global commitment to the organization and specific commitments to organizational constituents. This debate directly follows from the conceptualization of employee commitment as a conglomerate of multiple commitments, and is as such particularly linked to this conceptual development (Reichers, 1985). The core question in this debate is whether the influences are top-down, with global commitment influencing specific commitment, or bottom-up, with specific commitment influencing global commitment (Vandenberghe et al., 2014).

Applying the multi-target perspective to the seminal study by Vandenberghe et al. (2014), the third study uses a two-wave cross-lagged-panel design to investigate the direction of influences between global commitment to the organization and specific commitments to three constituents, namely top management, supervisor, and workgroup. Moreover, it further extends Vandenberghe et al.'s (2014) theoretical model based on

role theory and argues that the influences between these commitments should differ in strength, and should change across the employee career. Testing these additional hypotheses, the study first compares the influences across the three targets to determine whether they are differentially strongly linked to global commitment. Then, it employs a multi-cohort design to investigate the influences in three groups of employees, consisting of low-, medium- and high-tenured employees, respectively.

Its design enables the third study to largely extend the current knowledge on influences between commitments. It should inform research about the direction of influences between commitments, and whether these influences are equal for different targets, and stable across time. The multi-cohort approach allows the study to provide suggestions on how commitment develops over the employee career in organizations. Consequently, the third study intends to make major contributions to the multi-target commitment concept and theory, by shedding light onto how the subcomponents of multi-target commitment develop and relate to each other. These insights are also relevant for practice, because they inform practitioners whether certain commitments could function as a lever to increasing employee commitment overall, and whether commitment interventions should be tailored depending on the tenure of employees.

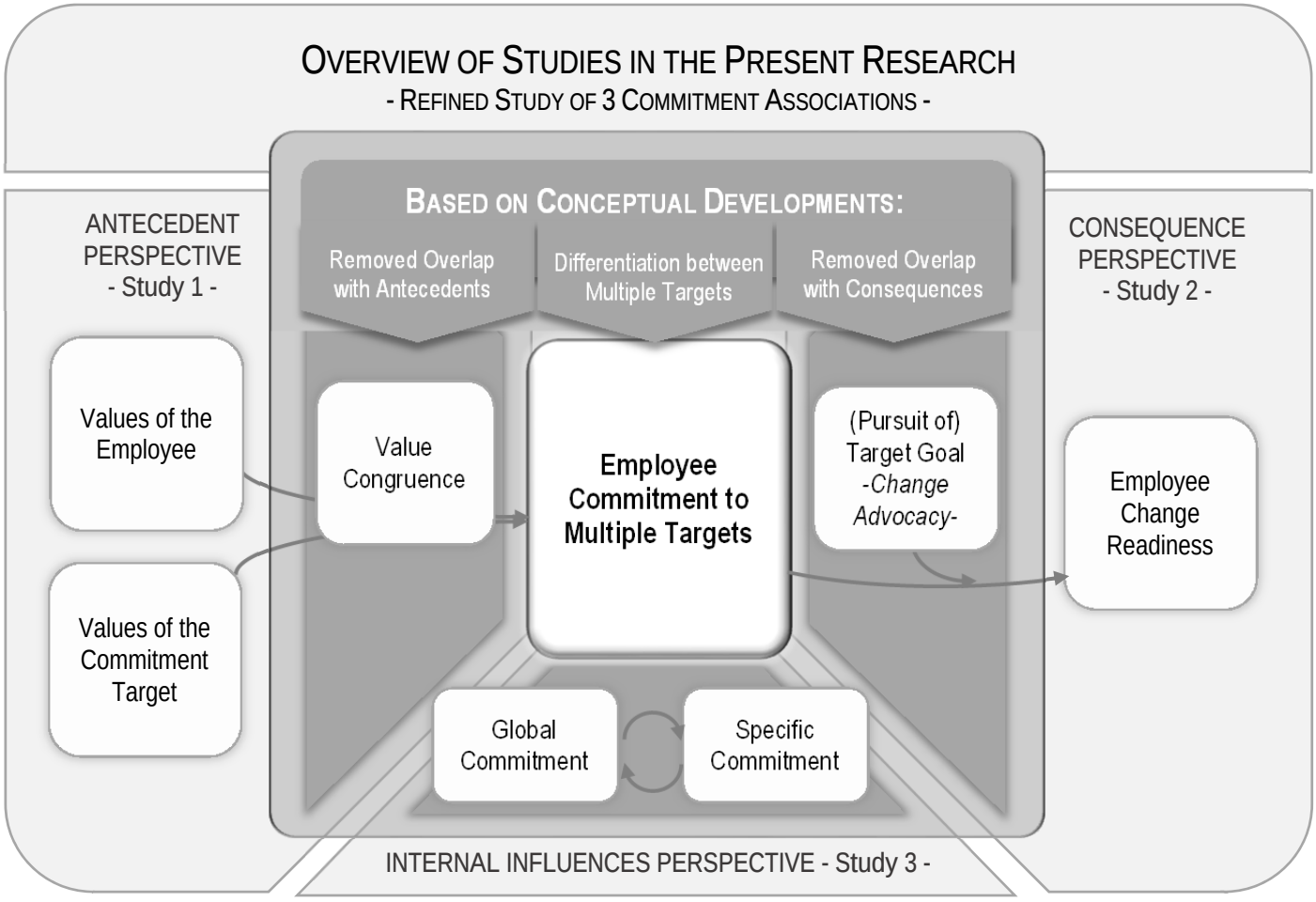

Figure 4. Overview of studies in the present research

Figure 4 provides an overview of the three studies and shows how they build on to the two major conceptual developments (i.e., the multi-target perspective, and the confound-free conceptualization). The following section presents these three studies consecutively[1]. A general discussion follows which summarizes the results of the three studies before deducing implications for research and practice. The thesis closes with a discussion of general limitations to the present research and suggestions for future research into commitment associations.

[1] The three following studies were submitted for publication in peer-reviewed journals, and their formatting adhered to the requirements of the respective journals. For reasons of legibility, this original formatting was slightly adapted for presentation within this thesis. Specifically, fonts, line spacing, and headline formatting were changed to be consistent throughout the thesis. Moreover, tables, figures, and footnotes are presented in meaningful positions within the articles. Finally, references are jointly presented at the end of the thesis body.

2.2. Study 1: The role of values for commitment: Comparing values and value congruence as predictors of commitment from a multi-target, multi-value perspective

Seggewiss, B. J. [1], Boeggemann, L. M. [1], Straatmann, T. [1], Mueller, K. [1], & Hattrup, K. (in review: 4th revision sumitted). The role of values for commitment: Comparing values and value congruence as predictors of commitment from a multi-target, multi-value perspective. *Journal of Business and Psychology.*

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Abstract

Purpose – Empirical research increasingly challenges the suggested central role of value congruence for commitment. The present study aimed to provide detailed insights into whether or when value levels and value congruence influence commitment. Specifically, the present study investigated the effects of value levels and value congruence on commitment, while differentiating between seven value dimensions, and between perceived values from and commitment to the organization, supervisor, and team as separate targets.

Design/methodology/approach – Data from a cross-organizational sample of 1,000 employees were analyzed using polynomial regressions with response surface analyses.

Findings – Perceived target values most consistently demonstrated strong effects on commitment to that target. Their effects were mostly independent of employee values. Value congruence only contributed to commitment for values concerning performance expectations toward employees. Across targets, people-centered values were most strongly linked to commitment.

Implications – Perceived values of commitment targets, and especially people-centered values, seem to play the key role in value–commitment associations, whereas value congruence has limited practical relevance for commitment. Accordingly, practitioners should foster strongly perceived positive values, especially people-centered values, from key commitment targets within organizations, rather than aim for value congruence.

Originality/value – This study's differentiated approach provides more extensive insights into values' associations with commitment by demonstrating consistencies and differences across targets and value dimensions. Results advance the debate on value congruence's role for commitment by showing that congruence effects are restricted to certain values, whereas perceived target values are consistently linked to commitment, hence recommending a shift of focus in value–commitment research.

Keywords: value fit, value congruence, employee commitment, organizational commitment, supervisor commitment, team commitment, person–organization fit, person–supervisor fit, person–group fit, organizational values, employee values

The role of values for commitment: Comparing values and value congruence as predictors of commitment from a multi-target, multi-value perspective

Employee commitment is a critical asset for organizational success (Chew & Entrekin, 2011). Commitment is defined as a voluntary bond, created when employees consciously choose to dedicate themselves to and take on responsibility for a target, such as the organization or its specific constituents (Klein, Molloy, & Brinsfield, 2012). Employee commitment influences "almost any behavior that is beneficial to the organization" (Riketta, 2002, p. 257), for instance, employee retention and attendance (Randall, 1990; Riketta, 2002; Van Steenbergen & Ellemers, 2009), organizational citizenship behavior (Bishop, Scott, & Burroughs, 2000), and job performance (Bishop et al., 2000; Cheng, Jiang, & Riley, 2003; Ellemers, de Gilder, & van den Heuvel, 1998). Thus, there is a great deal of interest in identifying the conditions that lead to higher levels of commitment.

In this context, value congruence between employees and commitment targets is thought to play a central role (cf., Klein et al., 2012; Swailes, 2002). Value congruence occurs when commitment targets and employees both endorse values to the same degree (Kalliath, Bluedorn, & Strube, 1999; O'Reilly, Chatman, & Caldwell, 1991), so that they share the same "beliefs about the way an individual ought to behave" (Ravlin & Meglino, 1987, p. 155). Several influential definitions of commitment assert that commitment is fundamentally based on value congruence (e.g., Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982), and many organizations strive for value congruence through personnel selection and development practices, hoping to be rewarded with high employee commitment (cf., Kristof, 1996).

However, recent empirical and conceptual developments have challenged the assumed central role played by value congruence in fostering commitment, suggesting a need for additional research designed to uncover the relationships between employee and target values and commitment (e.g., Abbott, White, & Charles, 2005; Finegan, 2000; Kalliath et al., 1999; Ostroff, Shin, & Kinicki, 2005). Specifically, Klein et al. (2012) point out that definitions of commitment often fail to distinguish between commitment on the one hand, and value congruence on the other. Definitions of commitment frequently overlap with values and congruence, so that popular commitment scales even measure commitment by asking about value congruence (e.g., Mowday, Steers, & Porter, 1979). Such overlap can artificially inflate empirical associations (cf., Brannick, Chan, Conway, Lance, & Spector, 2010). Thus, research needs to investigate relationships involving well-constructed measures that do not confound commitment with value congruence.

Second, as noted by Edwards and Parry (1993), studies of value congruence need to employ analytic methods that clearly distinguish between various types of effects, with polynomial regression and response surface modeling representing especially powerful techniques for providing better insights. For example, Kalliath et al. (1999) applied polynomial regression to study the effects of congruence between employee and organizational values on commitment to the organization. Their study

provided insights that were largely unexpected; specifically, value congruence had surprisingly small effects on commitment. Instead of finding the highest commitment levels whenever values were congruent, Kalliath et al (1999) found a strong tendency for commitment to be higher when values were also higher. This was reflected in strong effects of value levels in their regression analyses, and only small additional contributions to predicting commitment by considering congruence effects over and above the effects of value levels alone.

These results indicated that it was not the congruence between employee value levels and organizational value levels, but the absolute levels of organizational and employee values that were most relevant for commitment. This surprising finding led Kalliath et al. (1999) to raise the provocative question, "whether the importance given to the value congruence construct […] is justified and whether it should be complemented or replaced by main effect models" (p. 1196). In this context, a "main effect" as described by Kalliath et al. (1999) refers to the effect of value levels on commitment, with higher value levels predicting higher commitment. Congruence, by contrast, reflects a more complex phenomenon whereby commitment is higher when the employees' value levels are matched with the value levels of the organization.

The question raised by Kalliath et al. (1999) challenges a common assumption in commitment research, namely that commitment depends on value congruence. Thus, it has become a central concern in the field of commitment research (cf., Ostroff et al., 2005; Klein et al., 2012). And despite continuous empirical research (cf., Maierhofer, Kabanoff, & Griffin, 2002; Kristof-Brown, Zimmerman, & Johnson, 2005; Oh et al., 2014), it is still largely unclear whether commitment is predictable directly from value levels alone, or whether the added effects of value congruence are needed to account for variance in employee commitment levels (Kristof-Brown et al., 2005). Instead, the growing body of research paints a rather complex picture, as congruence effects are neither consistently supported nor rejected across different studies, and, in fact, not even within the single studies (e.g., Abbott et al., 2005; Finegan, 2000; Ostroff et al., 2005). This implies the presence of moderating effects, whereby value congruence adds to the prediction of commitment in some contexts but not in others. The question of whether value congruence matters to commitment may hence need to be approached differently; specifically, with a higher degree of differentiation. Instead of aiming for a general answer to the question of "whether it [value congruence] should be complemented or replaced by main effect models" (Kalliath et al., 1999, p. 1196), it may be advisable to ask and find out when value levels alone are sufficient to predict commitment, and when the effects of value congruence add to the prediction of commitment beyond the effects of value levels alone.

Following this line of thought, the present study adopts a more detailed perspective by applying differentiations recommended in recent research on values and on commitment. First, because different value dimensions relate to different beliefs, it is only natural for value research to find that values differentially relate to outcomes (Maierhofer et al., 2002). Thus, differentiating between specific value dimensions can provide insights into which values are particularly important for commitment, and

whether, depending on the specific value dimension, the effects of value levels alone or the combined effects of value levels and value congruence explain significant variance in employee commitment.

Second, research in the area of employee commitment underscores the potential value of differentiating between different targets of employee commitment (e.g., Reichers, 1985; Becker, 1992; Klein et al., 2012). From the employee's view, organizations are not just abstract entities, but are comprised of and represented by intra-organizational groups and individuals. Hence, an employee's commitment to the organization is more accurately modelled as a multi-target construct, with employees committing differently to the organization as a whole and to its multiple constituents (Reichers, 1985). Similarly, value research (Maierhofer et al., 2002) and value congruence research (Ostroff et al., 2005) also recommend distinguishing between the organization and organizational subgroups, such as supervisors and teams, as sources of different values within organizations. Indeed, research both on commitment to different targets and on values from different sources has reported differential relationships with the studied antecedents and outcomes (e.g., Becker & Kernan, 2003; Maierhofer et al., 2002; Oh et al., 2014; Veurink & Fischer, 2011). Parallel to these findings, the strength of the association between values and commitment, too, may vary depending on whether commitment and values refer to the organization, the supervisor, or the team. Jointly differentiating between the organization, supervisor, and team as commitment targets and sources of values could thus provide insights into whether the relationship between values and commitment differs not only with the value dimension, but also with the target, such that value levels alone predict commitment to one target whereas value congruence adds to the prediction of commitment to other targets.

In summary, the present research is a unique investigation of the effects of value levels and value congruence on employee commitment, explicitly differentiating between different value dimensions and different organizational commitment targets. This differentiated approach has the potential to provide a deeper understanding of the value–commitment relationship, and may help reconcile some of the mixed empirical findings that have been reported in the literature, by potentially showing that results vary depending on value dimensions and commitment targets. Furthermore, as a basic necessity to meaningfully examine the value–commitment relationship, this study explicitly emphasizes the distinct measurement of value congruence and commitment as suggested by Klein et al. (2012). With these extensions to former research, we hope to address the question of whether value congruence or value levels alone predict employee commitment. Specifically, our study seeks to inform commitment researchers and practitioners whether, and more specifically when a focus on congruent values may be merited. Thus, by shifting the focus from a general to a differentiated perspective, this study provides novel insights into whether there is a consistent pattern of associations between values and commitment, or whether associations instead depend on a) value content, b) who is the commitment target and value source, or c) on a combination of both.

Adopting a multi-value, multi-target approach in value–commitment research

Researchers have increasingly called for distinctions to be made among various specific value dimensions (e.g., Maierhofer et al., 2002; Ostroff et al., 2005). Because different values have unique effects on employees (Maierhofer et al., 2002), it is very likely that the effects on commitment of value levels and of value congruence differ across values. For example, shared values that focus on teamwork would likely encourage behavior that seeks to enhance team processes, whereas shared values that focus more on team results would probably encourage behavior that reflects a strong outcome orientation. Thus, recent studies by Ostroff et al. (2005), Finegan (2000), and Abbott et al. (2005) examined specific value dimensions and observed different associations with organizational commitment across value factors. Moreover, studies that examined the effects of value congruence on outcomes related to commitment (i.e., organizational identification, job satisfaction, and turnover intentions) also underscore the importance of differentiating among specific value dimensions (i.e., Cable & Edwards, 2004; Edwards & Cable, 2009). In particular, they presented results from separate analyses for eight value dimensions, which allowed them to show that congruence on different values not only influenced employee outcomes to different extents (Cable & Edwards, 2004), but also operated via different mechanisms (Edwards & Cable, 2009).

Commitment is also thought to reflect specific attachments to specific organizational constituencies, or "targets" of employee commitment (Becker, 1992; Becker, Billings, Eveleth, & Gilbert, 1996; Bishop & Scott, 2000; Mathieu & Zajac, 1990; Swailes, 2004; Vandenberghe, Bentein, & Panaccio, 2014; Vandenberghe, Bentein, & Stinglhamber, 2004), whereas an exclusive focus on commitment to the overall organization, as prevalent in previous value–commitment research, falls short of reflecting the complex reality of employee commitment (Reichers, 1985). For example, several researchers distinguished between employees' commitments to the organization, supervisor, and team, and found them to be related, yet distinct constructs with different antecedents and different consequences (Becker et al., 1996; Bishop et al., 2000; Siders, George, & Dharwadkar, 2001).

Moreover, following recommendations of Lavelle, Rupp, and Brockner (2007), when value–commitment research differentiates between organizations, supervisors, and teams as commitment targets, it should match these differentiations by equally distinguishing between value congruence with the perceived values of organizations, supervisors, and teams, respectively. Research on value congruence increasingly studies congruence as a multi-source construct (Oh et al., 2014). Yet, to date, research has not utilized polynomial regression methods to compare the effects of values and value congruence from different sources on commitment; and research has not yet matched differentiated value sources with differentiated value dimensions to investigate consequences for commitment to differentiated organizational targets.

Hypotheses

Against this background, the present study differentiates between the seven value dimensions of the Organizational Culture Profile (OCP; O'Reilly et al., 1991), and between the organization, supervisor, and team as sources of perceived values and as differentiated targets of commitment. In line with most previous value congruence–commitment research, the study focuses on subjective congruence (e.g., Ostroff et al., 1999; Kalliath et al., 2005). Subjective congruence examines employee values and target values as perceived by the employee, with congruence reflecting equal levels of value endorsement from both (Kristof-Brown et al., 2005; Kalliath et al, 1999; O'Reilly et al., 1991). Subjective congruence is considered more relevant than objective congruence, which uses independent self- and other-rated values, because it is perceptions of the environment rather than the environment itself which influence employees and their commitment (Edwards & Cable, 2009; Klein et al., 2012; Kristof-Brown et al., 2005). Subjective value congruence is also more suitable for the present research question than the third type of congruence, which is perceived congruence and refers to employees' own direct assessments of congruence (Kristof-Brown et al., 2005). Perceived congruence is susceptible to consistency bias and common method bias (Westerman & Cyr, 2004; Kristof-Brown et al., 2005), and does not allow for an independent analysis of the effects of value levels and value congruence on commitment. Therefore, subjective congruence is better suited for the primary aim of the present study than objective or perceived congruence (cf., Kristof-Brown et al., 2005).

Literature suggests multiple pathways by which value congruence may increase commitment. For example, shared values are believed to facilitate collaboration and reduce conflicts with potential commitment targets, and thus increase commitment to them (Ostroff et al., 2005). In addition, the similarity-attraction hypothesis by Byrne (1971; Oh et al., 2014; van Vianen, 2000) suggests that value congruence could further increase commitment because employees are attracted to those who they perceive as similar to themselves. Edwards and Cable (2009) suggested that these effects work together with trust to affect the outcomes job satisfaction, organizational identification, and turnover intention. They found that value congruence affected trust indirectly via increased attraction and improved communication, and also showed direct relations to trust. Trust is also positively linked to commitment to the organization, supervisor, and team (Klein et al., 2012; Lehmann-Willenbrock, Grohmann, & Kauffeld, 2013; Podsakoff, MacKenzie, & Bommer, 1996; Veurink & Fischer, 2011). Thus, taken together, employees appear to be more attracted to those with congruent values, have better communication experiences with them, and trust them more; whereas incongruent values may lead to conflicts. These principles suggest higher commitment when employees perceive target values which are congruent with their own values, and lower commitment when target values diverge from employee values.

However, the role of values for commitment is not limited to congruence effects. Employee values as well as perceived target values likely promote commitment not only when they are congruent, but also when they are higher. According to Kalliath et al.

(1999), employee value levels alone may predict commitment because “holding strong values personally adds to a feeling of certainty about one’s self […], which may lead to a generally positive outlook resulting in outcomes such as satisfaction and commitment” (p. 1194). A similar reasoning may explain how an employee's perceptions of others' values may relate directly to the employee's decision to commit to those other targets. Employees who perceive strong positive values held by organizations, supervisors, or teams should feel more certain about future outcomes and behaviors (cf., Maierhofer et al., 2002). According to uncertainty reduction theory (Berger, 1979), employees seek to avoid or to reduce uncertainty in workplace interactions. Consequently, employees may appreciate organizations, supervisors, or teams from whom they perceive strong values that provide them with clear expectations, and thus may find them particularly worthy of their commitment (cf., Kalliath et al., 1999). Indeed, clear organizational values were found to increase commitment to the organization in a study by Caldwell, Chatman, and O'Reilly (1990). Such predictability fosters trust (Edwards & Cable, 2009), which is related to commitment to all three targets examined in the present study (Klein et al., 2012; Lehmann-Willenbrock et al., 2013; Podsakoff et al., 1996; Veurink & Fischer, 2011). Consistent with this reasoning, previous research has reported positive effects of employee values (Kalliath et al., 1999) and of perceived organizational values (e.g., Abbott et al., 2005; Finegan, 2000; Kalliath et al., 1999) on commitment to the organization.

Following these arguments, the traditional reasoning for higher commitment when values are more congruent may need to be extended to also expect higher commitment when values are relatively more endorsed. Specifically, there should be an overall tendency for higher commitment when employee values and perceived target values are high compared to when they are low (value main effects, cf., Kalliath et al., 1999). Furthermore, in the light of the reasoning for congruence effects presented above, there should also be higher commitment when employee values and perceived target values are congruent compared to when they are incongruent (value congruence effects). In combination, then, commitment should be highest overall when values are high and congruent, and lower when values are lower, less congruent, or both.

Accordingly, we test the following hypotheses for the three targets a) organization, b) supervisor, c) team:

> *Hypotheses 1 a)–c): Employee values and perceived target values each have an overall positive effect on commitment to that target (positive main effects).*
>
> *Hypotheses 2 a)–c): Value congruence relates to commitment to a target, such that commitment increases when employee and target values move from opposition toward congruence.*
>
> *Hypotheses 3 a)–c): Higher value levels and value congruence jointly contribute to commitment to a target, such that commitment increases when values are both congruent and at higher value levels compared to when values are congruent at lower value levels.*

Method

Sample and procedure

This study is part of a commitment research project using panel data collected by aid of the GfK market research institute[2]. Online questionnaires were administered to 1000 participants in Germany, who were selected with respect to employee status (participants were included if they had been employed in the present position for at least one year prior to data collection), equal distribution of age between legal age and statutory retirement age in Germany, and gender and places of residence reflecting the German population distribution. Participants confirmed informed consent, were assured anonymity, and received small incentives for participation via the standard GfK incentive system. Obtained data were screened for insufficient effort responding "to reduce measurement error […] and derive more accurate estimates of relationships between constructs" (Huang, Curran, Keeney, Poposki, & DeShon, 2012, p.110). Specifically, participants were excluded if they satisfied any of the following criteria suggested by Huang et al. (2012) and Johnson (2005): 1) response time below an average of 2 seconds per item, 2) more than 90 percent consecutively identical answers, 3) individual reliability (i.e., correlation between odd and even items within each scale) below r = .30 or at r = 1. This procedure returned N = 814 remaining cases. A subsequent screening for outliers based on studentized residuals, leverage, and Cook's D following suggestions by Tabachnick and Fidell (2005) and Fox (1991) did not indicate any unusually influential cases that needed to be excluded. In accordance with selection quotas, participant age in the screened sample ranged from 19 to 65 years (M = 40.79, SD = 12.36), tenure ranged from 1 to 51 years (M = 10.91, SD = 10.63). 422 cases identified themselves as female, 389 as male, and 3 participants did not indicate their gender.

Measures

Commitment

Klein et al. (2012) pointed out that established commitment measures need to be adapted for multi-target studies. Therefore, this study employed a modified version of Allen and Meyer's (1990) affective commitment scale developed by Seggewiss (2011). The scale consists of three items that can be adapted to any organizational target. Accordingly, the resulting scale was made up of three parallel sets of three items each, measuring commitment to the organization, the supervisor, and the team, respectively, on a 7-point Likert scale (cf., Appendix). The resulting scale showed excellent fit with a 3-factor model (CFI = .993, IFI = .993, RMSEA = .050, superior to a single-factor model: CFI = .554, IFI = .554, RMSEA = .462; Table 1) and reliabilities (Cronbach's alpha = .96 for commitment to the organization, and .97 each for commitment to the supervisor and team, Table 2).

[2] GfK stands for Gesellschaft für Konsumforschung (Society for Consumer Research) and is a market research institute headquartered in Nuremberg, Germany. It is the largest market research institute in Germany and the fourth largest in the world and provides custom research based on specific target groups as well as market research in the areas of retail, technology, and media.

Values

In the present study, participants rated their own values and their targets' values, using a measure based on the Organizational Commitment Profile (OCP, O'Reilly et al., 1991). The OCP is one of the most extensive instruments to assess work values, and can be adapted to different organizational subgroups (Adkins & Caldwell, 2004; Edwards, 2008; Marchand, Haines, III, & Dextras-Gauthier, 2013). With its seven dimensions intended to reflect the most relevant work values in organizations (O'Reilly et al., 1991), the OCP assesses a larger number of and more specific values (Borg, Groenen, Jehn, Bilsky, & Schwartz, 2011) than value measures used in most previous value–commitment research (e.g., Abbott et al., 2005; Finegan, 2000; Kalliath et al., 1999). It thus enables increased differentiation regarding value dimensions and regarding targets alike.

Some modifications to the original OCP were necessary for the present study. First, responses were made on a Likert scale instead of using the original Q-sort approach. Second, the scale was translated to German using a translation–back-translation procedure with two bilingual researchers, one native English-speaking and one native German-speaking. Third, the scale was shortened to three items per value. Item selection was informed by factor loadings as reported in O'Reilly et al. (1991), and by results of a pretest with 173 German-speaking employed participants. Finally, following the example of previous OCP research (e.g., Chatman & Jehn, 1994; Sarros, Gray, Densten, & Cooper, 2005), the value "aggressiveness" was relabeled to better reflect the value content, using the label "competitiveness" instead as recommended by Sarros et al. (2005).

The final scale measured all seven OCP values Innovation, Stability, Respect for People, Outcome Orientation, Attention to Detail, Team Orientation, and Competitiveness (O'Reilly et al., 1991; Sarros et al., 2005) with three original OCP items each on a 6-point Likert scale (cf., Appendix). As can be seen in Table 1, practical fit indices suggested acceptable fit for models specifying 7 values factors when tested separately for each target (CFI and IFI between .922 for employee and .948 for team; RMSEA between .070 for employee and .078 for supervisor). Reliabilities were also acceptable, with Cronbach's alphas ranging from .69 (Stability, employee level) to .96 (Respect for People, supervisor level; cf., Table 2).

Conceptual distinctness of value and commitment operationalizations

A series of confirmatory factor analyses (CFA) investigated whether commitment to a target was distinct from each of the values perceived from this target, to evaluate discriminant validity of the commitment and value measures (cf., Klein et al., 2012). Specifically, for each target, model fit for the expected differentiated model (assuming a distinct commitment factor and seven perceived target value factors) was compared against model fit of seven competing non-differentiated models which merged the commitment factor with one single target value dimension at a time (i.e., every non-differentiated model consisted of only seven factors: six perceived target value factors and one factor that merged the seventh perceived target value with the commitment to

Table 1. Model fit statistics for study measures

		χ^2	*df*	*CFI*	*IFI*	*RMSEA*
Commitment						
Multi-target model (3 distinct factors for commitment to the organization, supervisor, team)		96.578	24	.993	.993	.061
Competing single-factor model (not differentiating between targets)		4718.278	27	.554	.554	.462
Values						
Individual values of the employee (7 distinct value factors)		829.991	168	.922	.922	.070
Perceived values of the organization (7 distinct value factors)		978.748	168	.933	.933	.077
Perceived values of the supervisor (7 distinct value factors)		1006.299	168	.942	.943	.078
Perceived values of the team (7 distinct value factors)		966.625	168	.948	.948	.076
Conceptual distinctness between commitment and perceived values measures						
organization	distinct model[1] (8 factors)	1079.619	224	.944	.944	.069
	competing non-distinct model with the best fit[2] (7 factors)	1861.002	231	.893	.893	.093
supervisor	distinct model[1] (8 factors)	1089.782	224	.953	.953	.069
	competing non-distinct model with the best fit[2] (7 factors)	2208.867	231	.892	.892	.103
team	distinct model[1] (8 factors)	1051.193	224	.956	.956	.067
	competing non-distinct model with the best fit[2] (7 factors)	2267.420	231	.892	.893	.104
Full measurement model[3]						
organization (7 employee values, 7 perceived organization values, 1 commitment to organization)		2523.791	819	.935	.935	.051
supervisor (7 employee values, 7 perceived supervisor values, 1 commitment to supervisor)		2518.551	819	.940	.941	.051
team (7 employee values, 7 perceived team values, 1 commitment to team)		2470.889	819	.944	.945	.050
across targets (7 employee values, 7 x 3 target values, 3 commitments)		7756.068	3585	.943	.943	.038

Notes:

[1] Distinct model: eight distinct factors for the seven perceived values of a target and commitment to this target.

[2] For each target, seven non-distinct models were created to compete against the expected distinct model. In each of them, a different perceived target value factor was merged with commitment to this target, reducing the number of factors from eight to seven. The table reports model fit for the best-fitting among these competing models within each target: the ones merging organizational commitment and organizational Stability values, supervisor commitment and supervisor Stability values, and team commitment and team Competitiveness values.

[3] Error terms of parallel value items were allowed to correlate across employee values and perceived target values, following Little (2013).

this target factor). Superior fit statistics for the expected differentiated model (differentiating commitment from all value factors) over each of the competing non-differentiated models served to indicate sufficiently distinct measures for target values and commitment. Table 1 reports model fit statistics for the differentiated models, and for the competing non-differentiated models that achieved the relatively highest model fits. For all three targets, the expected differentiated model's fit was superior to fit of any of the competing models (expected model versus best-fitting competing model for the organization: CFI = .944 vs. .893, IFI = .944 vs. .893, RMSEA = .069 vs. .093; supervisor: CFI = .953 vs. 892, IFI = .953 vs. .892, RMSEA = .069 vs .103; team: CFI = .956 vs. 892, IFI = .956 vs. .893, RMSEA = .067 vs .104).

Finally, three CFAs assessed fit of the measurement models within the three target levels (7 perceived value factors, 7 employee value factors, and 1 commitment to the target factor). Error terms of parallel items were correlated across scales for targets and the employee (e.g., organizational innovation value item and employee innovation value item) to reflect the item's unique variance (Little, 2013). The models fit the data well (CFI between .935 and .944, IFI between .935 and .945, RMSEA between .050 and .051, cf., Table 1). A final CFA assessed fit of the measurement model across targets. Results showed again good model fit (CFI = .943, IFI = .943, RMSEA = .038), indicating that concepts relating to different targets were distinct.

Marker construct: Role conflict

The study followed Lindell and Whitney's (2001) recommendations and included an unrelated marker construct for common method variance. Accordingly, Role Conflict was included and measured by 3 items from the Role Conflict and Ambiguity Scale by Rizzo, House, and Lirtzman (1970), using the same 7-point-Likert scale employed to measure commitment (cf., Appendix). Reliability was .85.

Analysis

Before hypotheses testing, analyses evaluated the potential impact of common method bias to assess whether it may hamper interpretation of subsequent results, using Harman's one-factor test and Lindell and Whitney's (2001) marker variable approach. Then, hypotheses were tested using polynomial regression with Response Surface Analysis (Edwards, 1994). Following the example of Edwards and Cable (2009), separate hierarchical regression analyses were performed for each value–commitment combination, and Type I error was controlled using the sequential Bonferroni procedure (Seaman, Levin, & Serlin, 1991). Predictors were midpoint-centered for reasons of meaningful interpretation, while still ensuring straightforward comparisons across values (Hayes, 2013). Polynomial regression analysis consists of two steps in the context of the present study. The first step entered values of the employee (X) and values of the commitment target (Y) as predictors of commitment to that target. The second step added the quadratic functions of both previous predictors (X^2 and Y^2) and their interaction (X*Y). If this addition of higher-order terms significantly improved prediction, then the polynomial regression equation with higher-order terms was considered as the more adequate representation of associations; otherwise, the restricted model from the first

step of the regression was retained which includes terms for the effects of value levels on commitment. Next, response surface analysis assessed characteristics of the three-dimensional response surface resulting from the previous regression (Edwards, 2009). This response surface displayed the predicted level of commitment (z-axis) for any combination of employee (x-axis) and commitment target values (y-axis). The hypotheses in the present study correspond to certain regression results and characteristics of the response surface which were evaluated in statistical tests.

Hypothesis 1 proposed an overall tendency for higher commitment as employee and perceived target values increase. Support for Hypothesis 1 was inferred when employee values (X) and perceived target values (Y) showed significant positive effects on commitment, as indicated in a significant contribution to predicting commitment by these two terms in the first step of the regression (significant R^2 for the main effects model) and positive linear regression weights for both predictors in this step (significant positive bx and by; cf., Kalliath et al., 1999).

Hypothesis 2 proposed that value congruence influences commitment, so that commitment increases when values move from opposition toward congruence. Following Edwards and Cable (2009), this condition was statistically evaluated by testing the surface's shape along the line of value incongruence, X = -Y. The incongruence line runs along the x-y-plane, connecting both points of complete opposition between employee and perceived target values, (1|6) and (6|1), and midway crossing through the point of perfect value congruence with both value levels at their scale midpoints (3.5|3.5). According to Hypothesis 2, the response surface should ascend from the endpoints toward the midpoint of this line. Therefore, we tested whether the surface was negatively curved along the incongruence line and had no significant slope at its midpoint (cf., Figure 1, Table 3; Edwards & Cable, 2009). Moreover, we tested whether the curved surface's "ridge", as indicated by the surface's first principal axis, ran along the line of congruence, X = Y. The congruence line also runs along the x-y-plane, but connects all points of perfect congruence between employee and perceived target values. A first principal axis running along the congruence line indicates that the relatively highest commitment levels across all value levels occurred when values were congruent. This requires that the first principal axis has a slope of 1 and an intercept of 0, which was tested with the bootstrapping procedure suggested by Edwards (2002), using 10,000 bootstrapping samples to calculate 1% confidence intervals for slopes and intercepts based on the bias-corrected percentile method.

Hypothesis 3 added another feature to the predicted response surface; specifically, that commitment should increase with increasingly higher value levels at which congruence occurs. This proposed combined contribution differs from the traditional claim that mere congruence is sufficient to maximize commitment regardless of value levels, which has been tested in most previous studies (e.g., Kalliath et al., 1999; Finegan, 2000; Ostroff et al., 2005). In contrast to the demands associated with a mere and perfect congruence effect (Table 3), Hypothesis 3 predicted that congruence at

higher levels of values is associated with higher commitment than congruence at lower value levels. This condition was statistically tested by testing the surface's shape along the value congruence line (cf., Edwards & Cable, 2009). According to Hypothesis 3, the response surface should ascend from congruence at the point where both values are lowest to the point where both values are maximal. Therefore, we tested whether the surface had a positive slope along the congruence line with no downward curvature (i.e., a positive slope with either no significant or a positive curvature; cf., Figure 1, Table 3).

Due to the large sample size, alpha level was set to 1% for all analyses.

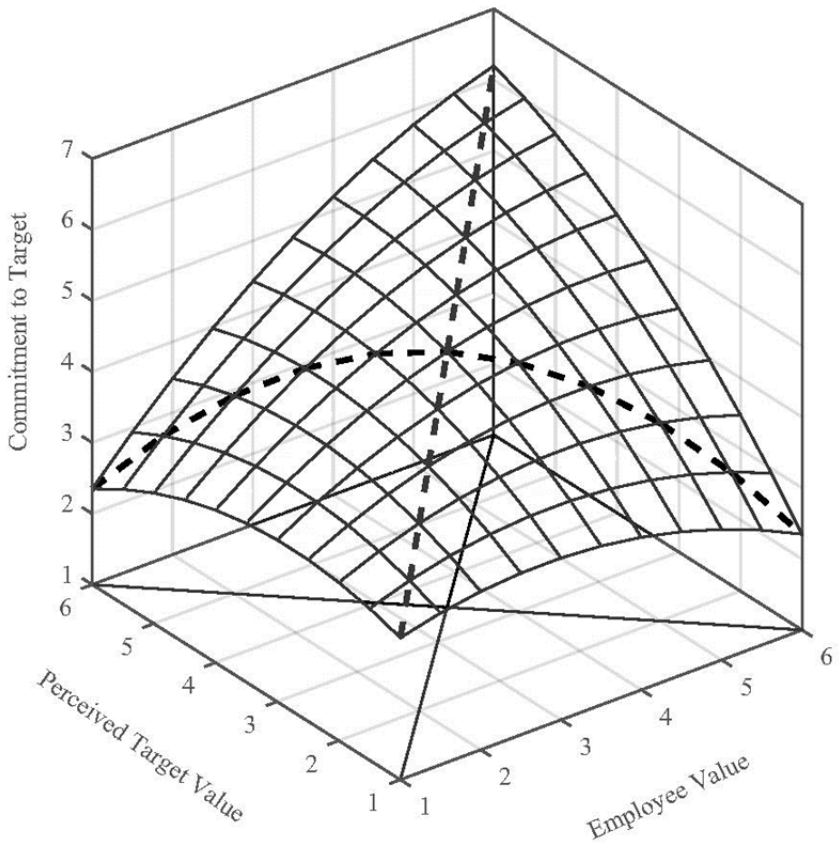


Figure 1. Surface plot showing the hypothesized combined effects of value levels and value congruence on commitment

Notes.
Solid lines on the X-Y-plane designate the lines of value congruence (X = Y) and incongruence (X = -Y). Dashed lines correspond to the 2 hypothesized characteristics of the response surface along the lines of congruence and incongruence: 1) A downward curvature with no slope along the incongruence line (X = -Y) indicates that value congruence relates to higher commitment than value incongruence. 2) A hypothesized positive slope with no downward curvature along the congruence line (X = Y) indicates that congruence on higher value levels relates to higher commitment than congruence on lower value levels.
Dotted lines correspond to the first and second principal axes of the surface plot, with the first principal axis hypothesized not to deviate from the congruence line (X = Y) so that commitment is relatively higher when values are congruent rather than incongruent.

Results

After data screening was completed as described above, the potential impact of common method bias was assessed. Harman's one-factor test showed that 34 percent of variance was explained by the first factor; which was deemed appropriate because all but one variable was expected to be positively interrelated. Furthermore, Lindell and Whitney's (2001) procedure estimated the extent of common method variance influences on correlations between study variables. Results showed that the correlation serving as proxy for common method variance (the smallest correlation between marker variable and criterion, $r_{\text{role conflict - supervisor commitment}}$, was only r = .02 (99%-confidence-interval: -.07 – .11). Moreover, partial correlations between study variables controlling for common method variance and imperfect measurement (Lindell & Whitney, 2001) showed the same patterns of results as the original correlations, indicating that common method variance did not account for significant associations.

Table 2 shows descriptives and correlations between study variables. Correlations followed patterns suggested by previous research (cf., Maierhofer et al., 2002), with higher correlations between variables with similar content or referencing the same target (e.g., individual Team Orientation was more strongly linked to commitment to the team than to any other commitment).

The following sections present results of hypothesis testing, separately for the targets organization, supervisor, and team.

Organization

Hypotheses were first analyzed for the organization as the value source and commitment target. Hypothesis 1 predicted overall positive effects of employee values and organizational values on commitment to the organization. Indeed, results from the first step of the regression showed that the main effects model significantly predicted commitment to the organization (R^2 ranging from .14 for Competitiveness to .29 for Respect for People, p < .001; cf., Table 3). Moreover, organizational values had positive main effects on commitment to the organization across all value dimensions (regression coefficients ranging from b = .22 for Outcome Orientation to b = .62 for Respect for People, p < .001). In contrast, and contrary to expectations, employee value main effects were only significant for three of the seven value dimensions, namely Innovation, Outcome Orientation, and Team Orientation (b = .20, .46, .21, p < .001). This means that perceived organization value levels predicted commitment, but only employee value levels Innovation, Outcome Orientation, and Team Orientation were related to commitment to the organization.

Hypotheses 2 and 3 predicted a joint contribution of value congruence and high values to commitment. Contrary to these hypotheses, polynomial regression showed that adding higher-order terms failed to significantly improve prediction of commitment to the organization for five out of seven value dimensions, suggesting only main effects of value levels for these values. However, higher-order terms in the regression significantly improved prediction for Innovation and Outcome Orientation values (both ΔR^2 = .03, p <

Table 2. Descriptives and correlations between study variables

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Commit.	1 to the organization	5.11	1.42	(.96)																
	2 to the supervisor	4.74	1.60	.68**	(.97)															
	3 to the team	5.60	1.32	.64**	.58**	(.97)														
Employee Values	4 Innovation	4.26	1.03	.38**	.39**	.33**	(.83)													
	5 Stability	4.65	0.83	.24**	.23**	.26**	.29**	(.69)												
	6 Respect for People	5.14	0.81	.26**	.27**	.36**	.34**	.48**	(.89)											
	7 Outcome Orientation	4.63	0.90	.37**	.30**	.29**	.49**	.39**	.33**	(.84)										
	8 Attention to Detail	5.06	0.77	.25**	.22**	.29**	.34**	.45**	.43**	.54**	(.77)									
	9 Team Orientation	4.87	0.86	.33**	.33**	.45**	.36**	.34**	.51**	.40**	.46**	(.79)								
	10 Competitiveness	4.33	1.00	.25**	.24**	.21**	.51**	.28**	.19**	.53**	.36**	.30**	(.73)							
Organizational Values	11 Innovation	4.29	1.10	.47**	.43**	.35**	.61**	.24**	.25**	.46**	.30**	.35**	.45**	(.86)						
	12 Stability	4.61	0.90	.38**	.35**	.30**	.28**	.49**	.36**	.35**	.33**	.32**	.31**	.44**	(.75)					
	13 Respect for People	4.62	1.16	.54**	.43**	.37**	.29**	.24**	.36**	.30**	.22**	.32**	.18**	.44**	.57**	(.94)				
	14 Outcome Orientation	4.94	0.94	.30**	.27**	.32**	.31**	.26**	.34**	.54**	.42**	.38**	.37**	.50**	.41**	.25**	(.87)			
	15 Attention to Detail	4.93	0.99	.37**	.28**	.32**	.25**	.23**	.29**	.43**	.49**	.31**	.25**	.47**	.54**	.52**	.54**	(.89)		
	16 Team Orientation	4.62	1.08	.48**	.40**	.39**	.31**	.22**	.30**	.34**	.27**	.49**	.23**	.48**	.48**	.70**	.31**	.56**	(.86)	
	17 Competitiveness	4.69	1.01	.36**	.31**	.29**	.38**	.21**	.26**	.45**	.31**	.33**	.54**	.61**	.42**	.33**	.60**	.46**	.42**	(.75)
Supervisor Values	18 Innovation	4.34	1.08	.38**	.45**	.31**	.54**	.18**	.26**	.42**	.30**	.31**	.38**	.70**	.35**	.43**	.45**	.44**	.44**	.51**
	19 Stability	4.60	1.01	.35**	.46**	.29**	.30**	.41**	.36**	.30**	.33**	.34**	.25**	.38**	.59**	.48**	.36**	.44**	.43**	.38**
	20 Respect for People	4.63	1.23	.45**	.57**	.36**	.28**	.22**	.33**	.26**	.24**	.32**	.19**	.36**	.42**	.65**	.30**	.41**	.53**	.32**
	21 Outcome Orientation	4.94	0.99	.28**	.29**	.30**	.34**	.22**	.35**	.47**	.34**	.35**	.33**	.47**	.37**	.34**	.66**	.52**	.37**	.57**
	22 Attention to Detail	4.88	1.01	.29**	.38**	.29**	.28**	.20**	.32**	.31**	.42**	.30**	.19**	.41**	.42**	.40**	.45**	.62**	.41**	.40**
	23 Team Orientation	4.64	1.13	.39**	.51**	.35**	.25**	.20**	.31**	.27**	.24**	.42**	.17**	.39**	.40**	.57**	.35**	.44**	.64**	.31**
	24 Competitiveness	4.65	1.02	.30**	.31**	.24**	.36**	.19**	.28**	.38**	.25**	.28**	.43**	.49**	.34**	.31**	.49**	.39**	.35**	.64**
Team Values	25 Innovation	4.31	1.08	.40**	.35**	.39**	.56**	.18**	.23**	.41**	.35**	.37**	.39**	.63**	.30**	.37**	.38**	.41**	.42**	.45**
	26 Stability	4.65	0.95	.36**	.34**	.42**	.34**	.44**	.38**	.37**	.36**	.44**	.30**	.37**	.53**	.40**	.36**	.43**	.44**	.38**
	27 Respect for People	4.86	1.07	.39**	.39**	.50**	.32**	.25**	.42**	.29**	.30**	.44**	.20**	.34**	.36**	.49**	.36**	.42**	.49**	.31**
	28 Outcome Orientation	4.63	1.00	.37**	.32**	.40**	.40**	.29**	.30**	.56**	.38**	.40**	.39**	.44**	.37**	.37**	.53**	.47**	.43**	.47**
	29 Attention to Detail	4.71	0.99	.35**	.31**	.40**	.32**	.29**	.31**	.34**	.49**	.45**	.29**	.39**	.40**	.42**	.38**	.58**	.48**	.38**
	30 Team Orientation	4.83	1.03	.36**	.36**	.50**	.23**	.22**	.34**	.29**	.32**	.52**	.19**	.33**	.35**	.46**	.36**	.42**	.57**	.31**
	31 Competitiveness	4.44	1.03	.36**	.32**	.32**	.41**	.24**	.24**	.44**	.31**	.33**	.53**	.48**	.34**	.32**	.42**	.38**	.38**	.61**
	32 Role Conflict	4.09	1.50	-.02	.02	.03	.19*	-.02	-.07	.13*	.05	.11*	.15*	.16*	.03	-.02	.05	.04	.04	.09

Table 2 (continued). Descriptives and correlations between study variables

		18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Commit.	1 to the organization															
	2 to the supervisor															
	3 to the team															
Employee Values	4 Innovation															
	5 Stability															
	6 Respect for People															
	7 Outcome Orientation															
	8 Attention to Detail															
	9 Team Orientation															
	10 Competitiveness															
Organizational Values	11 Innovation															
	12 Stability															
	13 Respect for People															
	14 Outcome Orientation															
	15 Attention to Detail															
	16 Team Orientation															
	17 Competitiveness															
Supervisor Values	18 Innovation	(.85)														
	19 Stability	.54**	(.81)													
	20 Respect for People	.55**	.70**	(.96)												
	21 Outcome Orientation	.56**	.50**	.42**	(.90)											
	22 Attention to Detail	.55**	.61**	.57**	.68**	(.90)										
	23 Team Orientation	.55**	.64**	.78**	.43**	.62**	(.88)									
	24 Competitiveness	.61**	.45**	.38**	.67**	.55**	.47**	(.79)								
Team Values	25 Innovation	.64**	.34**	.36**	.45**	.43**	.38**	.46**	(.89)							
	26 Stability	.37**	.56**	.41**	.41**	.45**	.43**	.36**	.57**	(.83)						
	27 Respect for People	.39**	.47**	.53**	.44**	.47**	.51**	.36**	.55**	.70**	(.95)					
	28 Outcome Orientation	.46**	.39**	.37**	.57**	.44**	.39**	.51**	.66**	.61**	.61**	(.91)				
	29 Attention to Detail	.41**	.43**	.43**	.45**	.56**	.45**	.38**	.61**	.66**	.69**	.71**	(.88)			
	30 Team Orientation	.40**	.42**	.48**	.41**	.47**	.55**	.38**	.54**	.64**	.80**	.62**	.71**	(.90)		
	31 Competitiveness	.48**	.36**	.36**	.48**	.37**	.34**	.61**	.62**	.52**	.49**	.70**	.61**	.51**	(.79)	
	32 Role Conflict	.12*	-.02	-.03	.07	.02	.00	.07	.18*	.09*	-.01	.12*	.10*	.04	.10*	(.85)

Notes: M = mean, SD = standard deviation, Commit. = Commitment. Cronbach's alpha coefficients are displayed in parentheses along the main diagonal.

* $p < .01$

** $p < .001$

.001). Response surface analyses tested whether the resulting response surfaces met the two key criteria for support of Hypothesis 2 and 3, that is, commitment increased 1) with increasing congruence between employee and perceived target values (H2) and 2) with relatively higher value levels at which congruence occurred (H3). Indeed, both surfaces showed the expected negative curvature along the incongruence line (curvature = -.39, -.62, respectively, $p < .001$).The surface for Outcome Orientation also had no significant slope along the incongruence line and its first principal axis did not significantly deviate from the congruence line (Table 3). However, the Innovation surface had a significant negative slope along the incongruence line (-.039, $p < .001$), and its first principal axis significantly deviated from the congruence line (intercept 1.02, CI 0.03–2.85, hence not including 0; slope 0.68, CI 0.30–1.41, hence including 1). These results indicate that commitment was also higher when Innovation values were congruent than when they were in direct opposition; however, a slight excess of organizational Innovation values over employee Innovation values was associated with relatively higher commitment than perfect congruence (Figure 2a). Accordingly, the first criterion was fully supported only for Outcome Orientation values (Figure 2b). The second key criterion, predicted by Hypothesis 3, was higher commitment when congruence occurred at higher rather than lower value levels. Both response surfaces showed the respective positive slope along the congruence line (0.57 for Innovation, 0.67 for Outcome Orientation; $p < .001$), and no downward curvature (0.10, $p < .01$ for Innovation, -0.01, *n.s.* for Outcome Orientation). Accordingly, Hypothesis 3 was supported for both values.

Supervisor

Hypotheses were tested in the same way for the supervisor as the commitment target. Results for Hypothesis 1—predicting positive effects for individual and perceived supervisor values—paralleled results for the target organization: All main effects models significantly predicted commitment to the supervisor (R^2 ranging from .11 for Competitiveness to .33 for Respect for People, $p < .001$), and all supervisor values had positive regression coefficients (ranging from $b = .31$ for Outcome Orientation to $b = .70$ for Respect for People and Stability, $p < .001$). All employee values but Stability and Attention to Detail values showed the expected positive employee value regression coefficients (b ranging from .19, $p < .01$ for Respect for People to .38, $p < .001$ for Outcome Orientation).

Tests for Hypotheses 2 and 3—predicting an effect of value congruence on commitment, and an effect of congruence at higher compared to lower value levels—again started by determining whether adding higher-order effects significantly improved prediction of commitment. This was supported for Innovation, Outcome Orientation, Competitiveness, and Attention to Detail values ($\Delta R^2 = .02, .05, .04$, $p < .001$, and .02 $p < .01$, respectively). Their respective response surfaces were each negatively curved and had no slope along the incongruence line (curvatures between -.33, $p < .01$ for Innovation and -.66, $p < .001$ for Outcome Orientation, all slopes *n.s.*). Furthermore, results indicated no deviations of the first principal axes from the congruence line (Table 3). Moreover, all of these surfaces showed the expected positive slope and no negative curvature along the congruence line (slopes ranging from .44 for Competitiveness to .70

for Innovation, $p < .001$, curvatures *n.s.*; Figures 2c-f). Accordingly, Hypotheses 2 and 3 were fully supported for these four values, whereas the independent main effects models, which address the effects of value levels on commitment, were retained for the values Stability, Respect for People, and Team Orientation.

Team

Finally, hypotheses were tested in the same fashion for the team as the relevant commitment target. As with the results for the other targets, tests of Hypothesis 1 supported significant prediction of commitment to the team from the effects of value levels (R^2 ranging from .11 for Competitiveness to .29 for Team Orientation, $p < .001$), where team values were significant predictors of commitment to the team across all value dimensions (ranging from $b = .37$ for Competitiveness and Innovation to $b = .53$ for Stability and Respect for People, $p < .001$). Each of the employee values, except Outcome Orientation and Competitiveness, also had a significant effect on commitment to the team (ranging from $b = .15$, $p < .01$ for Stability to $b = .39$, $p < .001$ for Team Orientation).

Again, analyses for Hypotheses 2 and 3, predicting joint value level and value congruence effects, were evaluated by first testing whether adding higher-order effects significantly improved prediction. None of the seven value dimensions fulfilled this criterion ($\Delta R^2 = .01$ for Innovation and Outcome Orientation; otherwise $\Delta R^2 = .00$; all *n.s.*). Accordingly, Hypotheses 2 and 3 were rejected as main effects models apparently best represented the value effects on commitment to the team.

Discussion

Traditionally, research and practice in the area of organizational commitment has tended to regard value congruence as an important antecedent, if not an essential part of commitment (Swailes, 2002). However, empirical studies increasingly suggest that it is value levels alone, rather than value congruence, that underlie most of the empirical effects of values on employee commitment (Kristof-Brown et al., 2005). The present study sought to provide more differentiated insights into the question of whether value levels of value congruence account for variance in various aspects of commitment in organizations (cf., Kalliath et al., 1999). Therefore, following suggestions in both the research on values and on commitment, the present study differentiated between a broad range of different value dimensions provided by the established OCP (O'Reilly et al., 1991), and differentiated between the organization, the supervisor, and the team as sources of perceived values and as targets of commitment.

Polynomial regressions and response surface analyses first tested whether value levels were related to commitment to each target (Hypothesis 1), and then tested whether value levels and value congruence jointly contributed to commitment (Hypotheses 2 and 3). Results provided two central insights. First, results for Hypothesis

Table 3. Criteria and results for tests of study hypotheses based on polynomial regression and response surface analysis

		Polynomial Regression								Response Surface Analysis					
		Step 1: Linear terms			Step 2: Curvilinear and interaction terms added					Shape along X=-Y		Shape along X=Y		1st Princ. Axis[b]	
		R^2 [a]	X	Y	ΔR^2	X	Y	X^2	Y^2	X*Y	slope	curv.	slope	curv.	slope	intc.
Criteria for support of																
	Mere congruence effect	–	–	–	sign.	–	–	neg.	neg.	pos.	0	neg.	0	0	1	0
	Hypothesis 1	**sign.**	**pos.**	**pos.**	–	–	–	–	–	–	–	–	–	–	–	–
	Hypothesis 2	–	–	–	**sign.**	–	–	–	–	–	**0**	**neg.**	–	–	**1**	**0**
	Hypothesis 3	–	–	–	**sign.**	–	–	–	–	–	**0**	**neg.**	**pos.**	**0/pos.**	–	–
Results for																
Target: Organization	Innovation	**.23**	**.20****	**.49****	**.03****	.09	.48**	-.02	-.12*	.25**	-0.39**	**-0.39****	**0.57****	**0.10***	**0.67**	1.03*
	Stability	**.15**	.12	**.54****	.01	–	–	–	–	–	-0.42**	–	**0.67****	–	–	–
	Respect for People	**.29**	.14	**.62****	.00	–	–	–	–	–	-0.48**	–	**0.76****	–	–	–
	Outcome Orientation	**.15**	**.46****	**.22****	**.03****	.21	.46**	-.09	-.22**	.30**	**-0.25**	**-0.62****	**0.67****	**-0.01**	**0.65**	**0.50**
	Attention to Detail	**.15**	.17	**.47****	.00	–	–	–	–	–	-0.30*	–	**0.64****	–	–	–
	Team Orientation	**.24**	**.21****	**.54****	.01	–	–	–	–	–	-0.33**	–	**0.75****	–	–	–
	Competitiveness	**.14**	.11	**.45****	.01	–	–	–	–	–	-0.35**	–	**0.56****	–	–	–
Target: Supervisor	Innovation	**.23**	**.31****	**.51****	**.02****	.24**	.46**	-.01	-.11*	.22**	**-0.22**	**-0.33***	**0.70****	**0.10**	**0.65**	**0.88**
	Stability	**.21**	.09	**.70****	.01	–	–	–	–	–	-0.61**	–	**0.78****	–	–	–
	Respect for People	**.33**	**.19***	**.70****	.00	–	–	–	–	–	-0.51**	–	**0.88****	–	–	–
	Outcome Orientation	**.12**	**.38****	**.31****	**.05****	.23	.28*	-.13	-.18**	.35**	**-0.05**	**-0.66****	**0.51****	**0.04**	**0.85**	**0.13**
	Attention to Detail	**.15**	.17	**.55****	**.02***	.20	.36*	-.07	-.10*	.21*	**-0.17**	**-0.38***	**0.56****	**0.04**	**0.85**	**0.51**
	Team Orientation	**.27**	**.26****	**.64****	.01	–	–	–	–	–	-0.38**	–	**0.89****	–	–	–
	Competitiveness	**.11**	**.22****	**.40****	**.04****	.08	.36**	-.10	-.11*	.28**	**-0.28**	**-0.49****	**0.44****	**0.07**	**0.95**	**0.57**
Target: Team	Innovation	**.17**	**.20****	**.37****	.01	–	–	–	–	–	**-0.17**	–	**0.57****	–	–	–
	Stability	**.18**	**.15***	**.53****	.00	–	–	–	–	–	-0.38**	–	**0.67****	–	–	–
	Respect for People	**.28**	**.28****	**.53****	.00	–	–	–	–	–	-0.25*	–	**0.81****	–	–	–
	Outcome Orientation	**.16**	.14	**.45****	.01	–	–	–	–	–	-0.31*	–	**0.60****	–	–	–
	Attention to Detail	**.17**	**.21***	**.46****	.00	–	–	–	–	–	-0.25*	–	**0.67****	–	–	–
	Team Orientation	**.29**	**.39****	**.46****	.00	–	–	–	–	–	**-0.07**	–	**0.85****	–	–	–
	Competitiveness	**.11**	.07	**.37****	.00	–	–	–	–	–	-0.30*	–	**0.45****	–	–	–

Notes. 1st Princ. Axis = first principal axis, curv. = curvature, intc. = intercept, sign. = significant, pos. = positive, neg. = negative, n.s. = not significant. $N = 814$.

[a] All R^2 are significant at $p < .001$.

[b] The bootstrapping procedure recommended by Edwards (2002) was employed to test whether the first principal axis' slope significantly differed from 1, and whether its intercept significantly differed from 0. Significant deviations at the bias-corrected 1% alpha level are indicated with an asterisk (*), and indicate that congruence does not maximize commitment at all value levels.

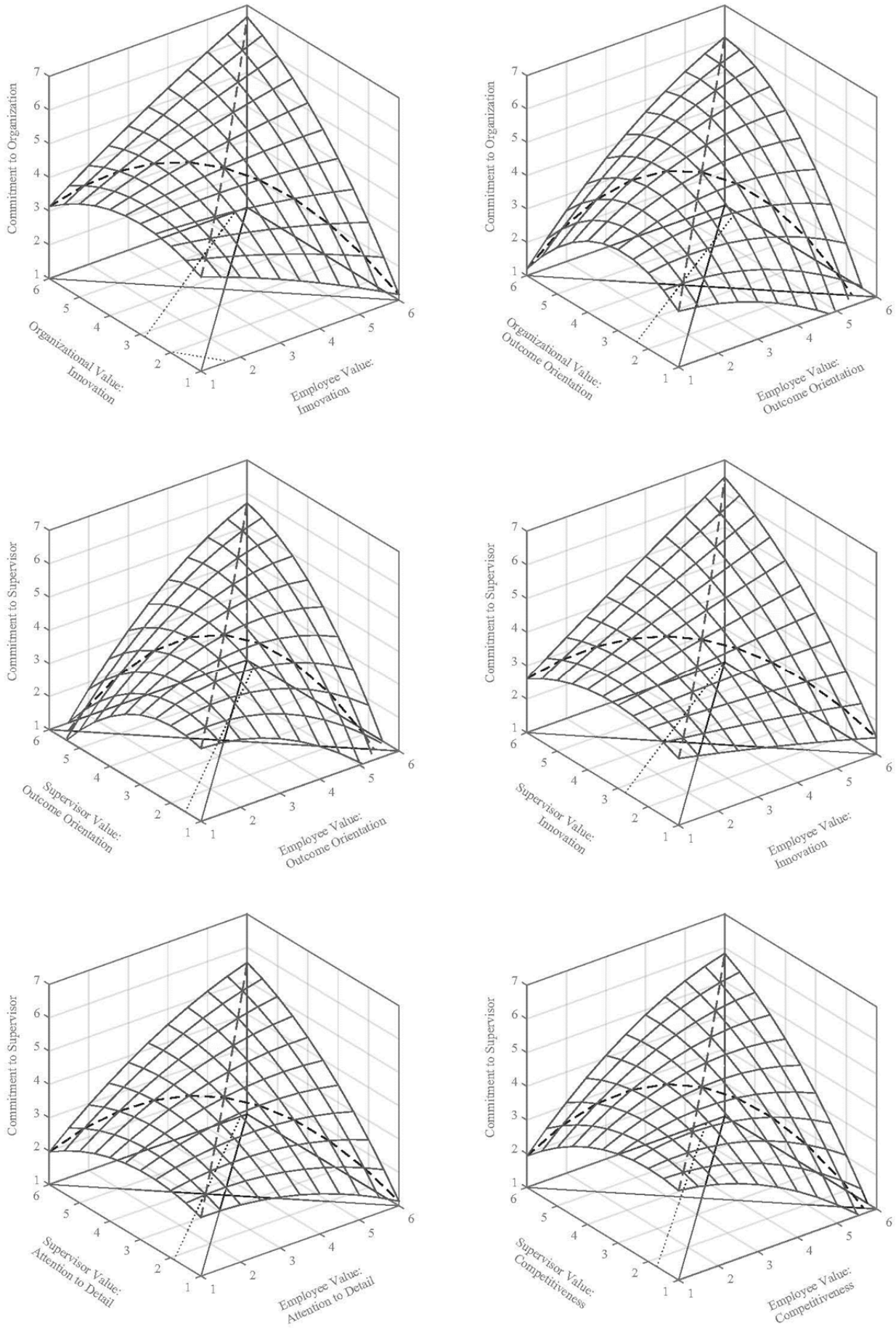
Model 1 predicted commitment to the commitment target as indicated in the first column from employee values (X) and perceived values of the commitment target (Y). Model 2 added their squared (X^2, Y^2) and interactive effects (X*Y) as predictors. All predictors were midpoint-centered before inclusion.

1 showed that main effects models significantly predicted commitment for all values and targets. This means that value levels alone account for significant variance in commitment to various organizational targets. This was true for each of the specific values perceived to be held by each of the commitment targets. Perceived target values most often were stronger predictors of commitment than employee values, and in many cases they even were the only significant predictors of commitment (Table 3).

Second, results for Hypotheses 2 and 3 revealed that congruence between employee values and perceived target values was of overall little relevance for commitment to the three targets. In fact, most values' associations with commitment were adequately represented by models that included the effects of value levels alone (i.e., main effect models). Accordingly, higher endorsement of these values on behalf of the employee or target was related to higher levels of commitment, regardless of congruence or incongruence. Many of these values had tilted response surfaces (negative slopes along the incongruence line, Table 3). This shape indicates that employees who reported value endorsement levels below the scale maximum were not highly committed if target values were congruent. Instead, these employees were actually more committed the more perceived target values exceeded employee values, because low target values strongly decreased commitment but incongruence did not.

Only commitment to the organization and commitment to the supervisor increased not only when values were relatively higher, but also when certain values were relatively more congruent. Specifically, the expected joint contribution of high values and congruent values was found for Innovation, Attention to Detail, Competitiveness, and Outcome Orientation on commitment to supervisor, and for Outcome Orientation on commitment to the organization (and for Innovation on commitment to the organization, with the caveat that slight excess of organizational values over employee values related to even higher commitment than perfect congruence). In these cases, commitment increased the most when values were higher and when they were more congruent at the same time (Figure 2). Commitment also increased if both the employees' and the perceived target values increased together so that the extent of congruence remained stable. Conversely, commitment decreased if only values of either the employee or of the target increased and resulted in pronounced incongruence between their values. In all these cases but organizational Innovation values, both kinds of incongruence (excess versus deficiency of target values relative to employee values) were associated with the same decreases in commitment (Table 3). However, more incongruence did not always decrease commitment: As can be seen from Figure 2, some incongruence occurring on high value levels resulted in higher commitment than congruence on low value levels.

Accordingly, the present findings support and extend the conclusion of Finegan (2000) and Abbott et al. (2005), who suggested that "perceived organizational values do appear to be the most consistent predictor of organizational commitment, more so than personal values or the fit between personal and organizational values" (Abbott et al., 2005, p. 544). By including additional relevant commitment targets beyond the organization, the present study shows that the same pattern found for the organization as



Figures 2 a) – f). Resulting surface plots for the six combinations of values and commitments with significant higher order terms

Notes. All predictors were midpoint-centered before inclusion. Surfaces are plotted across the original scale ranges. Solid lines designate the lines of value congruence (X = Y) and incongruence (X = -Y). Dashed lines correspond to the hypothesized downward curvature with no slope along the incongruence line, and positive slope with no downward curvature along the congruence line. Dotted lines correspond to the first and second principal axes of the surface plot.

the commitment target also holds for supervisors and teams as targets. Together, these results provide increasingly strong empirical evidence suggesting that value levels alone may be generally more important for commitment than value congruence effects, and that perceived target values play the most important role in this association.

These findings have important implications for the theoretical underpinnings of value and congruence effects on commitment. The relatively stronger support for the effects of value levels than for congruence may imply that first, strong values rather than value congruence increase predictability and reduce uncertainty, and that second, this increased predictability is more important for commitment than attraction or identification evoked by value congruence. Particularly, researchers have suggested that employees can more easily predict those with whom they share values (e.g., Ostroff et al., 2005; Schein, 1985), because employees can generalize from the implications of their own values to those of others. However, this process might be overly complex, because it requires employees to first assess the other person's values, and then evaluate congruence with their own values and their implications for behavior, before generalizing back to the other person. Instead of performing these cognitive tasks, employees may simply infer directly from another's values how they are likely to behave in the future. In doing so, employees should feel more confident in predicting the behavior of a person whose values appear to be strong even if this means that values are not congruent. This argument is backed by Cable and Edwards' (2009) finding that perceived predictability was related to higher value levels, but not to value congruence. Such predictability provided by strong values and the trust it evokes (Cable & Edwards, 2009) may be more important for commitment than attraction or identification evoked by value congruence. As Klein (2012) pointed out, commitment is not about liking or merging with the target, but about taking on responsibility for it. Against this background, it seems reasonable that employees may prefer committing to a target that appears to be predictable, dependable, and principled over committing to a target that is merely similar to them.

Nevertheless, results also indicated some congruence effects for some specific values. By differentiating between values and targets, we observed congruence effects for Innovation and Outcome Orientation values on both commitment to the organization and commitment to one's supervisor, and for Attention to Detail and Competitiveness values on commitment to one's supervisor (with the effects of Innovation values on commitment to the organization deviating slightly from the hypothesized shape). These results could suggest that congruence plays a role when incongruence might cause conflicts that dampen the positive effects of predictability. This appears to be the case with values from organizations and supervisors related to demands on employee performance, like demands related to producing outcomes (Outcome Orientation) and demands for maintaining specific standards (Attention to Detail). Because values guide peoples' priority decisions (Schwartz, 1994), supervisors and organizations whose performance-related values are similar to employees' may more likely set the same priorities as employees, thus reducing conflicts in performance evaluations. It is often thought that value congruence influences commitment through improvements to

collaboration and through reduced conflict (e.g., Maierhofer et al., 2002; Ostroff et al., 2005). The results of the present study refine this proposition by suggesting that value congruence is only relevant for values and commitment targets associated with performance expectations and evaluations.

Overall, the present study found that the levels of values related to interpersonal processes at work were the strongest predictors of commitment to organizational targets. Specifically, the two values Respect for People and Team Orientation best predicted commitment across all three targets. This was particularly apparent in the effects of perceived target values, as high people-centered values perceived from organizations, supervisors, and teams were consistently and strongly associated with higher commitment to these targets. Thus, our findings are consistent with previous research results that suggest that people-centered values are the most important values for commitment. For example, Kalliath et al. (1999) and Ostroff et al. (2005) found that human relations values were among the strongest predictors of commitment, compared to values related to open systems, rational goals, and internal processes. Similarly, Finegan (2000) and Abbott et al. (2005) reported that humanity values were more strongly related to affective commitment to the organization than values related to organizational vision, bottom line performance, and convention.

From a theoretical perspective, people-centered values held by employees likely increase commitment due to consistency motives (cf., Rokeach, 1973), causing employees to want to reciprocate the dedication to others that they perceive as being valued (Maierhofer et al., 2002). And conversely, when targets show more Respect for People and Team Orientation, they likely appear more considerate of employees. This may fulfill employees' relatedness needs (Alderfer, 1969), which, according to reciprocity theory (Gouldner, 1960), may lead employees to reciprocate the perceived favors by committing more strongly. Moreover, perceived people-centered values may exert normative pressure to act in accordance with these demonstrated social norms emphasizing interpersonal bonds and support (Bardi & Schwartz, 2003; Cialdini et al., 1990).

Taken together, an increasingly consistent pattern emerges from the combination of previous research with the results of the present study. It suggests a twofold answer to the current debate in value–commitment research: Indeed, it seems that value levels alone are important for commitment, and that value congruence may play an additional small role in some specific circumstances. From a practical and overall perspective, the focus may be shifted from value congruence to the levels of values perceived to be held by commitment targets, at least when the goal is to predict employee commitment levels. Most often, perceived value levels alone appear to be more relevant for commitment than the perception of value similarity, especially for values related to interpersonal relationships (i.e., Respect for People and Team Orientation). In contrast, value congruence appears to be relevant only for values related to performance expectations and evaluations (e.g., Outcome Orientation, Competitiveness, Attention to Detail), and

therefore value congruence appears to be relevant only in regards to specific aspects of managing commitment in practice. For commitment research in general, this finding strongly underlines Klein's (2012) request to exclude value congruence from commitment conceptualizations and measures. For value congruence research, this study shows the merit of differentiated analyses, because congruence effects appear neither to be universal across values nor across the organization, supervisor, and team. Clearly, this also underscores the need for more theoretical work and research into the mediating processes that link different values to employee outcomes, especially with respect to the effects of the levels of perceived people-centered values.

Practical implications

The present research has important implications for organizations seeking to promote commitment and enjoy its many beneficial consequences. Organizations often invest a great deal of effort in selecting employees with values similar to organizational values, and in socializing new employees in a way that fosters greater congruence with organizational values (Cable & Edwards, 2009). Yet, the present results suggest that practitioners may be well-advised to focus not just on the values of new employees, but to pay more attention to values of the organization and those of current organizational members who are potential commitment targets for employees. Results of the present research imply that commitment is highest in organizations in which values are clear and pronounced. Hence, organizations could profit from implementing organizational and personnel development practices that promote strong and perceivable values among all organizational members.

At the organizational level, it may help to emphasize the salient organizational values within vision and mission statements, to provide opportunities for value expression, and to encourage executives to express their values clearly (Oh et al., 2014). The present research recommends particularly emphasizing people-oriented values, such as Respect for People and Team Orientation, to encourage an environment in which the highest commitment levels can emerge. A third influential organizational value is Innovation. However, results showed congruence effects when organizational Innovation values were high. Therefore, strong Innovation values from organizations appear as most beneficial to employee commitment if they are matched by similarly strong Innovation value levels among employees. Consequently, with the aim of increasing organizational commitment, results recommend directing efforts toward crafting an organizational culture (cf., Hatch, 1993) characterized by high Respect for People and Team Orientation values, and a shared appreciation of Innovation in the organization and among all organizational members.

Regarding the supervisor level, leadership development should aim to specifically train and encourage supervisors to state and express their values clearly. Following the results of the current study, these efforts should particularly focus on supervisors' Respect for People, Stability, and Team Orientation values, because they seem strongly

related to employees' commitment to supervisors. Moreover, practitioners may also specifically select for supervisors who clearly hold these values.

Regarding the team level, results underscore the potential benefits of team development efforts. Specifically, team events designed to let employees experience their team members as team oriented and respectful towards others may help to strengthen commitment to the team. Moreover, in line with recommendations for the organizational level, practitioners may seek to promote strong team values and encourage expression and communication of these values within teams.

While it should be beneficial to promote strong values within organizations, supervisors, and teams, it ultimately is the employees' perceptions of these targets' values that relate to commitment (Edwards & Cable, 2009; Klein et al., 2012; Kristof-Brown et al., 2005). Accordingly, practitioners should not forget to invest efforts in fostering employees' value perceptions. For example, they may use feedback instruments or reflective meetings to ask employees how the organization's policies and practices as well as supervisors' or team members' behaviors may be indicative of values, and to encourage communication about values to raise awareness for values at different levels of the organization.

Finally, while results advise a stronger focus on perceived target values, they also provide advice for recruitment and selection of employees. Instead of focusing only on congruent values, the current results suggest that recruiters may benefit from looking for specific value levels in their future employees. In particular, employees with high Team Orientation seem more likely to commit to organizational targets. Moreover, employees with higher levels of values for Respect for People tend to develop higher commitment to their teams and supervisors, and if they were to potentially become supervisors themselves in the future, they may be more likely to attract higher commitment from their subordinates. The present results also suggest that it may be less important in organizations to foster value congruence than it is to foster greater value diversity among employees, so the organization can profit from the potential for greater innovation (cf., Kristof, 1996).

Limitations and future research

As in all research, there are several limitations to the present study that offer opportunities for future follow-up research. As often suggested, cross-sectional designs and use of self-reports may pose the threat of common method bias. However, cross-sectional studies on value fit report only slightly higher associations than longitudinal studies (Kristof-Brown et al., 2005). Moreover, previous research has shown that indirect fit measures, like those employed in this study, are less prone to such bias than direct measurement (Westerman & Cyr, 2004). Nevertheless, we also employed several methods to confirm that common method bias did not undermine conclusions from our results, including tests of competing factor models which each showed superiority of our hypothesized measurement model compared to alternative models. Future research

should continue to strive for study designs that are compatible with requirements of field research and yet allow investigating causal relations between values and commitment.

Although the present study investigated the effects of value levels and value congruence for several specific values, and identified empirical differences in the results for different value dimensions, we did not attempt to hypothesize such differences in advance. This is because the current theoretical and empirical literature do not provide sufficient basis for hypothesizing differential effects for different value dimensions. Accordingly, the mechanisms which underlie value effects on commitment remain an important area for future research. Most importantly, our finding of strong effects of value levels along calls for research into mediators of the effects of self and perceived other values on commitment. Whereas there has been substantial progress in theory and understanding of value congruence effects due to studies such as the work of Edwards and Cable (2009), there is still a lack of comparable theoretical work on the direct effects of value levels alone. Therefore, future research should develop an integrative theory explaining the conditions under which value levels and value congruence for specific values relate to commitment to specific targets.

A sound theoretical framework linking values to commitment could also help future research to identify relevant moderators of this association besides value content and commitment targets. This should help to address another potential limitation to the present study, namely that we did not control for potential moderating influences of participants' different organizational backgrounds. Future research could develop hypotheses related to how organizational settings, branches, job types, or job level may influence the relation between values and commitment, and conduct appropriate cross-level analyses. Moreover, it might be especially interesting to conduct cross-cultural studies and investigate potential influences of culture, because culture is strongly associated with values and commitment alike (Klein et al., 2012; Oh et al., 2014).

From a larger value fit perspective, it is important to note that the present study focused exclusively on value congruence and value main effects. Value congruence describes the supplementary fit between values, and as such is but one type of potential value fit effects (Westerman & Cyr, 2004). Future research might find complementary needs-supply fit (Kristof-Brown et al., 2005) a particularly interesting additional type of value fit for predicting commitment. In fact, some of the present findings and explanations may be interpreted as suggesting that commitment is increased when target values fulfill certain employee needs. For example, strong target values that provide predictability could fulfill employee needs for uncertainty reduction (Kagan, 1972). And the stronger effects of people-centered values could occur because they fulfill employees' relatedness needs (Alderfer, 1969). Cable and Edwards (2004) showed that supplementary and needs-supply fit each had unique effects on employee attitudes. Therefore, it would be interesting to see future research follow their example and jointly investigate the effects of supplementary fit and needs-supply fit on employee commitment to various organizational targets.

Conclusion

Overall, the present study makes unique contributions to understanding the relationships between values and organizational commitment by taking a comparative and differentiated approach. Specifically, the study focused on the unique effects of value levels and value congruence, while differentiating between multiple value dimensions, as well as multiple targets of commitment and sources of values. Results and comparisons particularly showed that target value levels were more important overall for commitment than was value congruence. Moreover, results suggested that people-centered values play a key role for employee commitment to each of the three targets investigated (that is, for commitment to the organization, the supervisor, and the team). Furthermore, the study's differentiated results advise practitioners to foster clear values and especially people-centered values within targets rather than seeking for overall value congruence between employees and the organization. Taken together, the present study contributes to informing practitioners and researchers on how values relate to commitment, and hopefully inspires future research on the principles that underlie their association.

APPENDIX (to Study 1)

Scales used in this study, back-translated from German. Scales were administered in the following order: Commitment to the organization, supervisor, team; values of the employee; perceived values of the organization, supervisor, team; role conflict. [Target] was replaced with “organization”, “supervisor”, “team”, and “me”, respectively. Commitment and Role Conflict scales were answered on a 7-point Likert scale anchored “strongly disagree” to “strongly agree”; value scales were answered on a 6-point Likert scale anchored “is not at all important to [target]” to “is very important to [target]”.

Commitment

I feel emotionally attached to my [target].
My [target] has a great deal of personal meaning for me.
I feel a strong sense of belonging to my [target].

Values

Innovation	Being innovative
	A willingness to experiment
	Being quick to take advantage of opportunities
Stability	Stability
	Predictability
	Being calm
Respect for People	Respect for the individual’s right
	Fairness
	Tolerance
Outcome Orientation	Achievement orientation
	Having high expectations for performance
	Being results oriented
Attention to Detail	Being precise
	Paying attention to detail
	Being analytical
Team Orientation	Being team oriented
	Working in collaboration with others
	Sharing information freely
Competitiveness	Being distinctive - different from others
	Being competitive
	Having a good reputation

Role Conflict

I receive incompatible requests from two or more people.
I work with two or more groups which operate quite differently.
I do things that are acceptable to one person, but not to others.

2.3. Study 2: (When) Is Commitment Linked to Higher Change Readiness? A Multi-Target Moderation Study

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Abstract

This study examined whether employees who are committed to top management, supervisors, or workgroups are more ready to change than those with lower commitment. Moreover, it investigated whether the association between commitment and change readiness depends on the perceived advocacy of change by commitment targets. Results from a survey of 220 blue collar workers showed that committed employees typically were more ready to change than those with lower commitment. As expected, commitment's positive effects were most pronounced when combined with high change advocacy by the commitment target. On the other hand, commitment's positive effects on change readiness disappeared or even turned into negative effects if the target's change advocacy was low. Conversely, change advocacy by top management, supervisors, or workgroups especially related to change readiness when employees were committed to these targets. This interdependence between commitment and change advocacy suggests that change managers may efficiently allocate resources by either identifying groups that employees feel committed to and gaining their change support, or by fostering commitment to groups that already advocate changes. Overall, the study contributes to our understanding of employee commitment's role in the context of change, by identifying conditions under which positive associations are found between commitment and change readiness.

Keywords: change readiness; commitment; change attitudes; affective commitment; supervisor commitment; workgroup commitment

(When) Is Commitment linked to Higher Change Readiness? A Multi-Target Moderation Study

In today's rapidly changing world of work, an organisation's ability to change is among its most important competitive advantages (Bouckenooghe, Devos, & van den Broeck, 2009; Rafferty, Jimmieson, & Armenakis, 2013). Research shows that the success of change processes depends fundamentally on whether employees support the change (Bernerth, 2004; McNabb & Sepic, 1995; Oreg, 2003; Oreg, Vakola, & Armenakis, 2011).

The psychological state which precedes employees' support of organizational changes is their individual change readiness (Kim, Hornung, & Rousseau, 2011), which has been defined as 'beliefs, attitudes, and intentions regarding the extent to which changes are needed and the organisation's capacity to successfully undertake those changes' (Armenakis, Harris, & Mossholder, 1993, p. 681). As the psychological precursor to change support or its opposite, change resistance, employee change readiness is a key construct for understanding employees' reactions to organizational change initiatives, and not surprisingly, is considered a prominent psychological lever for preparing a workforce for organizational changes (Armenakis et al., 1993; Kim et al., 2011; Rafferty et al., 2013).

Consequently, researchers have sought to understand the processes leading to increased employee change readiness. In this quest, several researchers have pointed toward employee commitment as a key variable underlying employee reactions to change (e.g., Armenakis et al., 1993; Eby, Adams, Russell, & Gaby, 2000; Swailes, 2002). Employee commitment is an important asset for organizations due to its positive effects on employee performance and attendance, turnover, and organizational financial performance (Angle & Perry, 1981; Randall, 1990; Riketta, 2002, 2008). Commitment, not surprisingly, attracts a great deal of attention from practitioners and, thus, might be a useful tool for promoting change readiness. At the core of commitment theory is the notion that committed employees feel bound to their organisation and its members by 'a volitional psychological bond reflecting dedication to and responsibility for' the organisation and its members (Klein, Molloy, & Brinsfield, 2012, p. 137). As a result, committed employees may be more ready to accept and support changes for the good of their organisation.

Yet, very few studies have empirically investigated the association between commitment and change readiness (Oreg et al., 2011). Those that have been reported found that commitment contributed positively to change readiness (e.g., Kwahk & Kim, 2008; Madsen, Miller, & John, 2005). Moreover, organisational commitment was found to better and more directly predict behavioural intentions in change contexts than related concepts such as job satisfaction or motivation (e.g., Iverson, 1996; cf., Vakola & Nikolaou, 2005). Thus, commitment, more than other employee attitudes and perceptions, such as perceived organizational support, leader member exchange, or job satisfaction, has a strong theoretical link to employee change readiness. By separating the commitment construct into commitments directed towards specific targets, we hope

to shed new light on the role of employee perceptions that may be especially relevant to understanding the conditions underlying employee readiness for organizational change. Specifically, current empirical insights into the commitment–change readiness association are limited because previous research has exclusively focused on employees' commitment to the overall organisation. Both the commitment and the change readiness research streams recommend broadening this focus by investigating employees' specific commitments to targets within the organization, such as executives and workgroups (e.g., Becker & Billings, 1993; Cohen, 1993; Meyer, Allen, & Smith, 1993). Similarly, change readiness research regards the social groups within organizations, such as colleagues and supervisors, as particularly relevant for change readiness (Eby et al., 2000; Hanpachern, Morgan, & Griego, 1998). Commitments to these groups may also be more manageable than abstract global commitment and therefore may be more relevant antecedents from a practical perspective (Dunham, Grube, & Castañeda, 1994). Consequently, change management theory and practice might significantly profit from research investigating if and under which conditions employee commitment to specific targets within the organisation contributes to change readiness.

Therefore, the present research contributes to the existent literature in two ways: First, it complements the previous empirical insights by studying how change readiness is affected by commitment to specific targets *within* the organisation. In doing so, the study also follows suggestions to assess employee commitment as a multi-target construct to allow for more comprehensive insights (cf., Klein et al., 2012). Accordingly, it investigates and compares the associations between change readiness and specific employee commitments to the three most established intra-organisational targets: top management, supervisors, and workgroups (Becker & Billings, 1993; Swailes, 2004).

Second, the study aims to enhance our understanding of underlying processes that link commitment and change readiness by examining how perceived endorsement of organisational changes by specific organisational constituencies moderates the relationship between commitment to these constituents and change readiness. Specifically, much conceptual work on commitment suggests that committed employees will strive to pursue what they perceive to be their commitment targets' goals (e.g., Brown, 1996; Mowday, Steers, & Porter, 1979; Reichers, 1985). Therefore, the present study suggests that it should be important whether committed employees believe that change readiness will help in attaining the goals of their commitment targets—that is, whether change is one of their commitment target's goals. Accordingly, the present study hypothesizes that the association between commitment to an intra-organisational target and change readiness depends on how much an employee perceives the commitment target to advocate changes. By testing these hypotheses empirically, the present study intends to help researchers to better understand the associations between employee commitment and change readiness, and to offer practitioners meaningful strategies for preparing employees for successful organisational changes.

Linking Change Readiness and Commitment

Employee commitment has long been suggested to facilitate successful change (Armenakis et al., 1993; Eby et al., 2000; Swailes, 2002). In particular, employees who are committed to their organisation show a higher general individual change readiness, that is, a higher overall tendency to be ready for change regardless of the content of a specific change (Kwahk & Kim, 2008). This general individual change readiness appears especially helpful for organisations today because of the increasing complexity in today's change projects and organisations (Holt, Armenakis, Harris, & Feild, 2007). Specifically, unlike related concepts such as commitment to change which are directed at single specific and well-defined change projects (Herold, Fedor, Caldwell, & Liu, 2008), general individual change readiness is particularly relevant for the ongoing, frequently overlapping and inseparable changes which are typical in today's constantly adapting organisations (Bouckenooghe et al., 2009; Iverson, 1996; Madsen et al., 2005). Furthermore, these more complex changes require individual change readiness rather than collective forms of change readiness such as team or organisational change readiness (Holt, Armenakis, Harris et al., 2007): Whereas organisational change readiness is important for organisation-wide changes which require collective behaviour change (Weiner, 2009), individual change readiness is especially important for dynamic and differential changes which rely on the individual employees' willingness to adapt and incorporate the required changes into their daily work (Eby et al., 2000; George & Jones, 2001). Moreover, information about change readiness at the individual level allows for exploring differences between employees and subdivisions, which aids in tailoring interventions (Holt, Armenakis, Harris et al., 2007). Therefore, individual change readiness is especially relevant for managing the dynamic and multifaceted changes in the complex human systems of today's organisations (Holt, Armenakis, Harris et al., 2007).

Empirical research has linked commitment to several change-related outcomes, suggesting that commitment contributes to such general individual change readiness. For example, meta-analyses have shown that employees with higher commitment to the organisation are generally more willing to engage in extra-role behaviours (Riketta, 2002). Accordingly, employees with high commitment to the organisation may be less deterred by the typical side-effects of change initiatives, such as the additional uncompensated time and effort that is often required during organisational changes (Iverson, 1996). Similarly, committed employees show higher levels of organisational citizenship behaviour (Mayer & Schoorman, 1992), meaning they are more willing to acquire new skills, accept temporary discomfort, help co-workers, and suggest changes themselves (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). As a result, change may appear less stressful to and may be more favourably evaluated by employees who are committed to the organisation. Additionally, research has consistently shown that organisational commitment is related to an increased willingness to stay with the organisation over time (Cohen, 1993; Randall, 1990). Thus, committed employees should be especially interested in the organisation's long-term existence, and hence, they should welcome changes that make the organisation a good place to work in the future.

Despite this strong theoretical basis, direct tests of the association between commitment and change readiness are rare (Oreg et al., 2011). For instance, in the two studies we were able to uncover in the literature, Madsen et al. (2005) reported an association between organisational commitment and change readiness of $r = .45$ ($p < .001$), and Kwahk and Kim (2008) found that organisational commitment had a positive effect of $\beta = .17$ ($p < .001$) on change readiness. Accordingly, both theory and empirical evidence link commitment to higher change readiness. However, the present study argues that these empirical findings likely reveal only part of the overall connection between commitment and change readiness, because employee commitment extends beyond commitment to the organisation. More precisely, employees commit not only to the overall organisation, but they simultaneously develop commitments to other specific organisational constituents, such as top management, supervisors, and workgroups (cf., Klein et al., 2012). Many of these constituencies play an active and influential role during organizational change efforts, implying that commitments that are formed to these specific constituencies are likely to be relevant to organisational change readiness.

Assessing commitment as a multi-target construct and precisely specifying these different targets of commitment offers a number of advantages in the areas of assessment, theoretical understanding, and practice. In terms of measurement, for example, specific questions regarding commitment to specific targets are probably clearer to respondents than questions regarding commitment to a broader and more abstract “overall organization” (Czaya, 1999). Moreover, the multi-target conceptualization is especially thought to better reflect the complexity of employee relations within organisations (Reichers, 1985). Indeed, research has convincingly demonstrated the existence and differential effects of specific commitments to various commitment targets (e.g., Becker & Billings, 1993; Bishop, Scott, & Burroughs, 2000; Ellemers, Gilder, & van den Heuvel, 1998; Van Steenbergen & Ellemers, 2009). Assessing multiple specific commitments significantly improved prediction for a wide range of work behaviours and attitudes (e.g., Becker & Billings, 1993; Cohen, 1993; Meyer et al., 1993), including change-related variables such as innovation (Swailes, 2004). And, from a practitioner’s perspective, the more specific results also allow for more fine-grained interventions (Dunham et al., 1994).

The three constituents that are the most prominent and established intra-organisational commitment targets—top management, supervisors, and workgroup (Swailes, 2004)— play a vital role for change readiness and change implementation (e.g., Armenakis et al., 1993). In fact, employees’ social relationships in the workplace are the most influential antecedents of change readiness (Hanpachern et al., 1998; Vakola & Nikolaou, 2005). And despite a lack of direct empirical studies into this question due to the previous focus on organisational commitment, many related findings indicate that specific commitments to top management, supervisors, and workgroups could substantially contribute to change readiness.

On the one hand, the same principles that link organisational commitment to change readiness should also result in a positive link between the specific commitments

and change readiness. Parallel to organisational commitment, commitments to supervisors and to workgroups also promote organisational citizenship behaviour (Bishop et al., 2000; Cheng, Jiang, & Riley, 2003). Accordingly, employees with specific commitments should also be more willing to show the extra effort needed for change implementation than those with less commitment to specific targets (cf., Iverson, 1996).

On the other hand, findings also indicate that each of the specific commitments could have additional positive effects on change readiness. For example, commitment to top management is associated with higher trust in management (Cook & Wall, 1980; Podsakoff, MacKenzie, & Bommer, 1996). As a result, employees who are committed to upper management may be more likely to accept management's request for change as being well-intentioned and sensible, and may therefore be more ready to change. With respect to commitment to supervisors, Hanpachern et al. (1998) reported that employees' feelings, attitudes, and perceptions toward supervisors increased change readiness. Regarding commitment to workgroups, the same study (Hanpachern et al., 1998) found that employees' feelings, attitudes, and perceptions toward colleagues also increased change readiness. Moreover, Eby et al. (2000) found that trust in peers, which closely relates to workgroup commitment (Lehmann-Willenbrock, Grohmann, & Kauffeld, 2013), strengthened change readiness.

Accordingly, theory and previous findings indicate that commitments to top management, supervisors, and workgroups are likely to be important predictors of individual change readiness that have found little consideration in previous research. Therefore, the present study seeks to complement the previous literature by investigating the role of commitment to specific intra-organisational targets in employee change readiness. Based on the arguments presented above, the study proposes that commitment to top management, commitment to supervisors, and commitment to one's workgroup are positively associated with individual change readiness.

At the same time, conforming to previous findings of differential associations with different specific commitment targets (e.g., Becker & Billings, 1993; Van Steenbergen & Ellemers, 2009), the associations of commitment to top management, commitment to supervisor, and commitment to workgroup with change readiness may differ in strength. As this is the first study to investigate these differences, neither commitment theory nor previous research results suggest specific directions of such potential differences. Therefore, instead of hypothesizing a pattern of differences, we explore potential differences in the effects associated with different commitment targets in an effort to suggest directions for future theorizing and empirical investigation.

Against this background, the present study investigates the associations between change readiness and commitment to top management, supervisors, and workgroups. Extant theory and empirical evidence suggest that the positive effects of commitment to the global organisation on change readiness are likely to transfer to commitment to specific intra-organisational targets.

Accordingly, the first hypothesis states:

Hypothesis 1. Commitment to top management, commitment to supervisor, and commitment to workgroup positively relate to change readiness.

The Role of Commitment Target's Change Advocacy

Researchers largely agree that commitment not only binds a person to a target, but also to the *target's goals* (e.g., Brown, 1996; Meyer, Becker, & van Dick, 2006; Mowday et al., 1979; Reichers, 1985). Thus, in the context of change readiness, research should consider whether employees perceive change to be one of their commitment targets' goals. Consequently, in the present study we examine the effects of employees' perceptions of whether their commitment targets have a positive attitude toward change. We term this perception of a target's attitude toward changes the commitment target's *perceived change advocacy,* and argue that perceived change advocacy plays an important role in establishing employee change readiness.

Indeed, change advocacy by executives is often seen as a necessary prerequisite for employee change readiness (Cunningham et al., 2002; Eby et al., 2000; Jones, Jimmieson, & Griffiths, 2005). Top level managers and supervisors who advocate for change may serve as examples, create environments that support change, and reward change-supportive behaviour. Accordingly, management support for change has been shown to foster change readiness (Armenakis & Bedeian, 1999; Holt, Armenakis, Feild, & Harris, 2007). Moreover, when confronted with unknown and ambiguous situations, people tend to watch for others' reactions as a reference for their own behaviour and attitudes (Festinger, 1954). Therefore, in the context of change, and hence insecurity (Pasmore & Fagans, 1992; Schweiger & Denisi, 1991), perceived attitudes of top management, supervisors, and workgroups become especially important for the individual employee's attitude. In accordance with the literature, this study therefore hypothesizes:

> *Hypothesis 2. Perceived change advocacies by top management, supervisors, and workgroups are related positively to employee change readiness.*

Beyond such direct effects, the present study proposes that perceived change advocacy moderates the relationship between commitment and change readiness. This hypothesis rests on two basic theories. First, commitment resembles a *communal relationship* (Mills & Clark, 1982). Social exchange theory (Blau, 1964) suggests that people who engage in communal relationships 'place greater emphasis on the needs of the other party' (Cropanzano & Mitchell, 2005, p. 883). Therefore, the study expects committed employees to show especially high levels of change readiness when their commitment target advocates change, as it allows them to act in accordance with the wishes of their commitment target.

Second, Heider's (1958) balance theory also predicts an interaction between perceived change advocacy and target commitment. Balance theory suggests that individuals have a consistency motive and strive for balancing relations between themselves, another person, and any third element. Specifically, they want to achieve a balance between (1) their own relation with another person, (2) this other person's relation with the third element, and (3) their own relation with this third element. These three relations form the so-called triad of attitudes and relations (Heider, 1958). Triads are balanced if either all relations are positive (e.g., a person likes another person and

both like the same team), or one relation is positive while the other two are negative (e.g., a person likes another person, and both dislike the team; or a person likes a band and *dis*likes any person who *dis*likes this team). In the context of commitment and change, the triad consists of relations between the three elements (1) employee, (2) commitment target, and (3) change. The relation between employee and commitment target (1–2) is represented by commitment; the relation between employee and change (1–3) is represented by change readiness; and the relation between the commitment target and change (2–3) is represented by the target's change advocacy. Following balance theory, if a committed employee (i.e., 1–2 is positive) perceives the commitment target to advocate change (i.e., 2–3 is positive), the employee should prefer to advocate the same opinion and be ready for change (i.e., 1–3 is positive). By contrast, if a committed employee (i.e., 1–2 is positive) does not perceive the commitment target to advocate change (i.e., 2–3 is neutral), there is no urge for the employee to further increase his or her change readiness (1–3 is not increased). Stated simply, high change advocacy by the commitment target should increase positive effects of commitment on change readiness. Therefore, as a third hypothesis, it is proposed:

> *Hypothesis 3. The relationship between commitment to an organisational target and employee change readiness is moderated by the employee's perception of the commitment target's change advocacy, such that the positive relationships between commitment and readiness increase in strength as perceived change advocacy increases.*

Method

Sample and Procedure

The study was conducted in a German mechanical engineering plant undergoing successive organisational changes. Overall, 468 skilled manufacturing workers were asked to answer the computer-based questionnaire under controlled conditions in the on-site computer pool, with the same researcher present at all times. Participation was voluntary, and anonymity was ensured. A total of 216 out of 220 completed questionnaires were usable, representing a response rate of 47%. Participant ages ranged from 19 to 61 (M = 37.82, SD = 10.24), tenure ranged from 1 to 42 years (M = 11.47, SD = 9.89). Most respondents were male (3 participants were women), corresponding to the generally low proportion of women among skilled manufacturing workers in Germany (2.1–3.1 percent in the year of data collection; Krings, 2011). Response rates were equal for all participating subdivisions.

At the time of data collection, the production site went through a series of post-acquisition changes. The current focus was on adjustments of policies and culture to the new parent organisation, especially on establishing continuous improvement processes and competency management systems.

Measures

Sample specifications and the differentiation between commitment targets required modifications to existing scales (cf., Klein et al., 2012). Accordingly, established scales were translated, shortened, and if necessary, slightly modified to relate to the different targets. Respondents indicated their answers on 5-point Likert scales anchored 'strongly disagree' to 'strongly agree'. The complete scales are given in the appendix.

Commitment

Three parallel measures were created for commitment to top management, commitment to supervisors, and commitment to workgroups. They consisted of three items from Allen and Meyer's (1990) Affective Commitment Scale which met Klein et al.'s (2012) recommendations for distinct measurement of commitment (e.g., 'I feel emotionally attached to [commitment target]'). Confirmatory factor analysis (CFA) with AMOS 23 showed superior fit for the three-factor model with separate factors for commitment to top management, supervisor, and workgroup (CFI = .969, IFI = .969; RMSEA = .083) over a one-factor model (CFI = .515, IFI = .523; RMSEA = .308). Cronbach's Alpha for commitment to top management was .851, to supervisors .911, and to workgroup .876.

Change Readiness

Five change readiness-items were translated from Kwahk and Kim (2008). Their scale represents a measure of individual change readiness that does not target a single specific change project, but assesses a more general readiness for organisational and workplace changes overall (cf., Kwahk & Kim, 2008). It is therefore especially apt for the present study's purpose, which is to provide insights into how commitment can contribute to creating the general change readiness that is deemed indispensable for the often overlapping and continuous changes in many of today's organisations (Bouckenooghe et al., 2009; Iverson, 1996). Kwahk and Kim's (2008) scale is based on Dunham et al. (1994) and corresponds to Armenakis et al.'s (1993) conceptualization, which includes a behavioural intention component (Rafferty et al., 2013). Accordingly, the present study modelled change readiness as a two-component measure, representing behavioural intentions (e.g., 'I intend to do whatever possible to support change') and the cognitive appraisal of changes (e.g., 'I usually benefit from change'). This two-factor model showed excellent fit (CFI = .996, IFI = .996; RMSEA = .038); reliability was acceptable (.76).

Change Advocacy

Perceived change advocacy, which represents the perception that a specific commitment target has a positive attitude about change, was measured with four items per commitment target. These items were adapted from Bouckenooghe et al.'s (2009) 'attitude of top management toward change' scale (e.g., 'In my opinion, [commitment target] usually supports change processes unconditionally'). CFA showed that the three-factor model with separate factors for change advocacy by top management, supervisor, and workgroup (CFI = .958, IFI = .959; RMSEA = .074) fit the data better than a one-factor model (CFI = .605, IFI = .611; RMSEA = .223), and reliabilities were good (top management .849, supervisors .913, workgroup .853).

Finally, the complete measurement model was tested. Fit was compared to the next more parsimonious model by collapsing the two most strongly correlated factors (commitment to supervisor and perceived change advocacy by supervisor) into a single factor. Results confirmed superior fit of the proposed measurement model (CFI = .944, IFI = .946; RMSEA = .055 versus CFI = .865, IFI = .868; RMSEA = .084).

Analysis

The associations between commitment and change readiness (Hypothesis 1) and between change advocacy and change readiness (Hypothesis 2) were evaluated by means of Pearson correlation coefficients using the SPSS software package version 23. We also conducted exploratory tests of differences in correlations using the procedure recommended by Steiger (1980).

Hypothesis 3 proposed interactions between commitment to a target and the perceived change advocacy by that target for all three targets. Following suggestions by Tabachnick and Fidell (2005), the overall significance of adding moderation effects was tested before the three moderation effects were evaluated separately. Accordingly, a four-step hierarchical regression was run in SPSS version 23, which regressed change readiness on (1) age as control variable (based on its significant correlation with some of the study variables), (2) commitment to top management, supervisor, and workgroup as a set, (3) change advocacies by all three targets as a set, and (4) interactions between commitment to each target and change advocacy by this target as a set. This hierarchical analysis served as a conservative test to determine whether subsequent separate analyses of the three target-specific effects were justified. Such separate analyses were needed because interaction terms' regression weights from regression analyses containing multiple interaction terms do not adequately reflect each interaction's relative effect and significance (McClelland & Judd, 1993). Therefore, following recommendations by Robinson and Schumacker (2009), separate hierarchical regression analyses tested each moderation effect independently for significance and effect size. Significant moderation effects were further analysed by statistical slope analysis (Preacher, Rucker, & Hayes, 2007), using the Johnson-Neyman Technique as suggested by Hayes (2013).

According to Hayes (2013), the Johnson-Neyman Technique has several advantages over the conventional approach of testing moderations by picking some points along the continuum of the moderator variable and comparing effects at these points. Most importantly, the points at which the moderation effect is conventionally tested are often selected by relying on conventions like using the mean and one standard deviation above and below the mean. Consequently, conventional approaches are often 'arbitrary […], sample specific, […] and may be quite unrepresentative [… if] the moderator is highly skewed' (Hayes, 2013, p. 329). The Johnson-Neyman Technique resolves the arbitrariness by essentially conducting the analysis in reverse. Specifically, with regard to the present study, the conventional analysis would have identified the effect size and corresponding p-value for the effect of commitment on change readiness at an arbitrarily chosen value of the moderator (change advocacy). In reverse, the Johnson-Neyman Technique identified those values of the moderator at which the effect

of commitment on change readiness transitioned from being significant to being statistically nonsignificant. Accordingly, the analysis divided the range of moderator (change advocacy) values into regions for which the effects of commitment on change readiness was significant versus regions for which it was not significant, and reported the corresponding overall effect of commitment on change readiness (i.e., direct effect plus moderated effect) across the range of change advocacy values for each commitment target. The Johnson-Neyman Technique was performed in SPSS version 23 using the PROCESS macro model 1 by Hayes (2013). In addition, results were reconfirmed with Matlab 2014, which was employed for plotting the slopes and confidence intervals for the overall effect of commitment on change readiness across the entire range of moderator values.

Results

Table 1 shows observed means, standard deviations, and correlations among the study variables. Commitment to workgroup was high overall (M = 4.47, SD = 0.75); but was lower to supervisors (M = 3.56, SD = 1.18), and top management (M = 3.02, SD = 1.15).

Hypothesis 1 predicted positive associations between employees' commitments and their change readiness. It was fully supported: Commitments to all three targets correlated with change readiness (Table 1). Change readiness' association with commitment to top management was strongest (r = .50, p < .01), and was significantly higher than associations with commitment to supervisor (r = .31, Z = 3.07, p < .01) and workgroup (r = .22, Z = 3.31, p < .01), which did not differ significantly from each other (Z = 0.97, p = .17).

Hypothesis 2 predicted that perceptions of top management's, supervisors', and workgroup's change advocacies positively relate to change readiness. Indeed, each perceived change advocacy correlated with change readiness (correlation of change readiness with perceived change advocacy by top management r = .37; by supervisor r = .32; by workgroup r = .32; p < .01 each). The associations did not differ significantly from each other ($Z_{\text{top management–supervisor}}$ = 0.88, p = .191; $Z_{\text{top management–workgroup}}$ = 0.67, p = .244; $Z_{\text{supervisor–workgroup}}$ = 0.03, p = .489).

Hypothesis 3 predicted interactions between commitment to a target and that target's change advocacy for all three targets. Following suggestions by Tabachnick and Fidell (2005), the overall significance of adding moderation effects was tested in an overarching hierarchical regression analysis before the three moderation effects were evaluated separately. However, regression weights from separate analyses for each target are more adequate to evaluate the hypothesized moderation effects than regression weights from this overarching analysis (Robinson & Schumacker, 2009). Therefore, the overarching analysis' results were primarily inspected with regard to the overall contribution to prediction by each predictor set. Overall, across targets, age (as control variable), commitment, change advocacy, and their interaction accounted for 37.5 percent of variance in change readiness (Table 2). Results from step 3 showed that change advocacy variables did not significantly improve prediction once the effects of

Table 1. Means, standard deviations, and correlations among study variables.

	M	SD	1	2	3	4	5	6	7	8	9
1 Commitment to top management	3.02	1.15	(.85)								
2 Commitment to supervisor	3.56	1.18	.48**	(.91)							
3 Commitment to workgroup	4.47	0.75	.10	.15*	(.87)						
4 Change advocacy by top management	3.35	0.89	.47**	.35**	.09	(.85)					
5 Change advocacy by supervisor	3.74	0.97	.39**	.62**	.18**	.56**	(.91)				
6 Change advocacy by workgroup	3.74	0.87	.29**	.27**	.41**	.23**	.33**	(.85)			
7 Change readiness	3.78	0.75	.50**	.31**	.22**	.37**	.32**	.32**	(.76)		
8 Age	37.82	10.24	.27**	.01	-.01	.21**	.13	.10	.25**	--	
9 Tenure	11.47	9.89	-.02	-.03	-.08	.07	.04	.07	.08	.62**	--

Notes: Cronbach's alpha coefficients (Cronbach, 1951) are displayed in parentheses along the main diagonal.
*$p < .05$
**$p < .01$

Table 2. Model summary of the hierarchical regression testing the overall en-bloc contribution of commitment, change advocacy, and their interaction in the prediction of change readiness across all three targets.

					Model 1		Model 2		Model 3		Model 4	
	Variables added to previous model	R^2	ΔR^2	*p*	*b*	*p*	*b*	*p*	*b*	*p*	*b*	*p*
Model 1	Age	.06	.06	.000	.02	.000	.01	.020	.01	.051	.01	.045
Model 2	Commitment to	.30	.24	.000								
	Top management						.26	.000	.22	.000	.17	.001
	Supervisor						.05	.227	.02	.647	.03	.591
	Workgroup						.17	.005	.13	.055	.26	.001
Model 3	Perceived change advocacy by	.32	.02	.080								
	Top management								.10	.109	.16	.016
	Supervisor								.02	.812	.03	.684
	Workgroup								.09	.116	.08	.156
Model 4	Commitment x Perceived change advocacy	.38	.05	.002								
	Top management										.02[a]	.579
	Supervisor										.03[a]	.468
	Workgroup										.20[a]	.001

Notes: Dependent variable: Change readiness.
All variables were mean-centered prior to inclusion.
[a] Interaction terms' regression weights do not adequately reflect each interaction's relative effect and significance when regression analyses contain multiple interaction terms (McClelland & Judd, 1993). Therefore, following recommendations by Robinson and Schumacker (2009), subsequent separate hierarchical regression analyses tested each moderation effect independently for significance and effect size (cf., Table 3).

commitment were accounted for, even though they significantly correlated with change readiness ($\Delta R^2 = .02$, $p = .080$). In contrast, the addition of the three interaction terms significantly improved prediction ($\Delta R^2 = .05$, $p < .01$), justifying further analyses of moderation effects.

Accordingly, three separate hierarchical regression analyses tested each moderation effect independently for significance and effect size. Adding interaction terms significantly increased change readiness prediction for all three targets (top management: $\Delta R^2 = .02$, $p < .05$, supervisor: $\Delta R^2 = .04$, $p < .01$, workgroup: $\Delta R^2 = .07$, $p < .01$; Table 3). Plots of the interactions (Figure 1) show that the overall direction of effects was consistent with Hypothesis 3: Commitment showed stronger relationships with change readiness when commitment targets were perceived as advocating changes.

This visual comparison of slopes was followed up by statistical slope analysis (Preacher et al., 2007) using the Johnson-Neyman Technique (Hayes, 2013). Results for the top management target showed two regions of moderator values with significantly different slopes for commitment effects on change readiness: One region comprised all change advocacy values of 1.95 and above (on the change advocacy Likert scale ranging from 1 through 5). For respondents reporting change advocacy within this range, commitment to top management significantly related to change readiness ($b = .14$, $p < .05$ to $b = .39$, $p < .001$). The other region comprised change advocacy values below 1.95. For those 6 percent of respondents reporting change advocacy within this range, commitment to top management was not significantly related to change readiness.

For the supervisor target, commitment significantly related to change readiness if change advocacy was at 3.60 or above ($b = .10$, $p < .05$ to $b = .26$, $p < .001$), representing 64 percent of answers. Again, lower levels of change advocacy resulted in non-significant commitment effects.

For the workgroup target, commitment significantly increased change readiness if change advocacy was at 3.01 or above ($b = .13$, $p < .05$ to $b = .62$, $p < .001$), representing 78 percent of answers. Again, lower levels of change advocacy resulted in non-significant commitment effects, but only as long as they were higher than 1.65. Values below this second threshold (2 percent of answers) constituted a third region, associated with *negative* effects of commitment on change readiness ($b = -.20$, $p < .05$ to $b = -.36$, $p < .01$). Figure 2 displays commitment slopes and regions of significance for all three targets.

Discussion

In a global business environment characterized by rapidly changing demands and opportunities, an organisation's ability to change has become indispensable for continued organisational success (Madsen et al., 2005). Researchers have suggested that organisational commitment might be a key to creating employee change readiness (e.g., Eby et al., 2000; Swailes, 2002), which is vital for successful organisational change (Armenakis et al., 1993). But empirical investigations of the relationships between

Table 3. Results of separate regression and slope analyses for the moderation of each commitment–change readiness association by the commitment target's change advocacy.

				b			Moderation	Range of conditional	Region(s) of	Percent of cases
	R^2	ΔR^2	*p*	Commitment	PCA	Interaction	effect size [a]	effect of commitment [b]	significance [c]	within regions
Top management	.28	.02	.035	.26**	.16**	.08*	.02	.07 (n.s.) to .39**	1.95 to 5.00	93.95
Supervisor	.15	.04	.003	.12*	.23**	.11**	.04	-.19 (n.s.) to .26**	3.60 to 5.00	64.35
Workgroup	.18	.07	.000	.29**	.22**	.24**	.07	-.36** to .62**	1.00 to 1.65	1.91
									3.01 to 5.00	77.62

Notes: Dependent variable: Change readiness.
PCA = Perceived change advocacy by the commitment target.
All variables were mean-centered prior to inclusion.
Two-step hierarchical regressions added the interaction between PCA and commitment to a model of their linear effects only.
[a] Squared partial correlation between interaction term and criterion (Cohen, 1988).
[b] Overall effect of commitment on change readiness (i.e., direct effect and indirect effect) across the range of possible moderator values.
[c] Regions of moderator values for which commitment has a significant effect on change readiness (cf., Hayes, 2013).
*$p < .05$
**$p < .01$

commitment and change readiness are rare and results vary (e.g., Kwahk & Kim, 2008; Madsen et al., 2005; Oreg et al., 2011). The present study provides a new, complementary approach to understanding the role of commitment for change readiness by simultaneously examining employees' commitments to different intra-organisational groups, namely top management, supervisors, and workgroups. Moreover, the present research investigated how these groups' advocacies for change moderate the association between commitment and change readiness, which may help to explain varying effect sizes and provide additional insights relevant to organisational practice.

The first hypothesis of the present study predicted that commitments to all three targets would be related positively to change readiness, and results were fully supportive. Higher levels of commitment to each target were related to greater change readiness. Exploratory tests indicated that the correlation between commitment and change readiness was higher for commitment to top management (r = .50) than for commitment to supervisors and workgroup (r = .31, r = .22, respectively). Although the reasons for these differences require further investigation, the present results underscore the merit of explicitly distinguishing between commitment targets to better understand commitment associations. If replicated in future research, the stronger effects observed for commitment to top management may imply that practical interventions that are target specific, especially those that focus on top management, may facilitate attitudes that are supportive of organisational changes (cf., Dunham et al., 1994).

A typical means practitioners employ to improve employee change readiness is encouraging change advocacy by organisational executives and designated change agents (Armenakis et al., 1993; Weber & Weber, 2001). Indeed, results of the present study showed that perceived change advocacy by top management, supervisors, and workgroup each significantly correlated with employee change readiness, supporting Hypothesis 2 (Table 1). However, quite remarkably, the set of change advocacy variables did not significantly improve prediction of change readiness when the effects of commitments were controlled for (ΔR^2= .02, p = .080; Table 2). This suggests that executives' support for change may actually have little direct effect on employee change readiness above the effects of employee commitment.

However, the importance of change advocacies arises when considering their moderating effects on the commitment–change readiness association, as predicted by Hypothesis 3. In combination, the three moderation effects further improved the prediction of change readiness (ΔR^2= .05, p < .01). Separate analyses (cf., Robinson & Schumacker, 2009) showed that the extent to which commitment was moderated again differed across the three targets. For the top management target, the interaction explained additional 1.5 percent of variance. This size is typical for interaction effects in field studies in social sciences (Champoux & Peters, 1987; Chaplin, 1991; McClelland & Judd, 1993). By contrast, effects for the supervisor and workgroup targets exceeded this range, adding 3.5 and 6.5 percent, respectively. These differences are also apparent in plots of the interactions (Figure 1). Despite the different effect sizes, all three plots show the expected pattern: For average levels of change advocacy by commitment

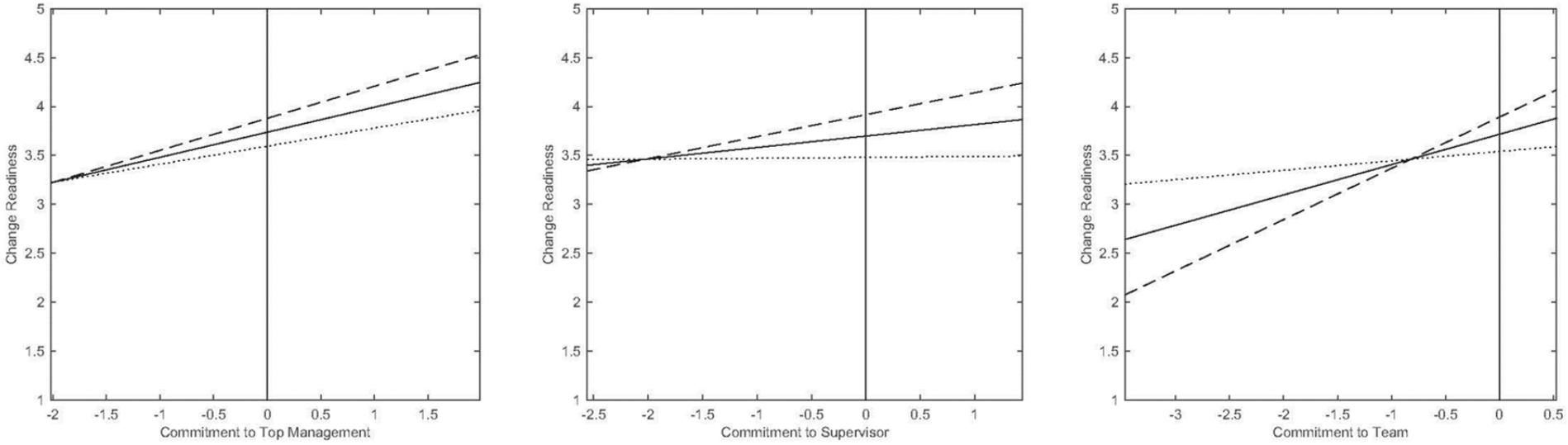

Figure 1. Interactions between commitment and change advocacy by commitment target in predicting change readiness.
Notes. All predictors are mean-centered. Axes correspond to the original scale ranges of predictors and outcome variables.
Solid lines show the regression line for the mean of the moderator, dotted lines for one standard deviation below the mean, dashed lines for one standard deviation above the mean. The vertical line designates the predictor mean.

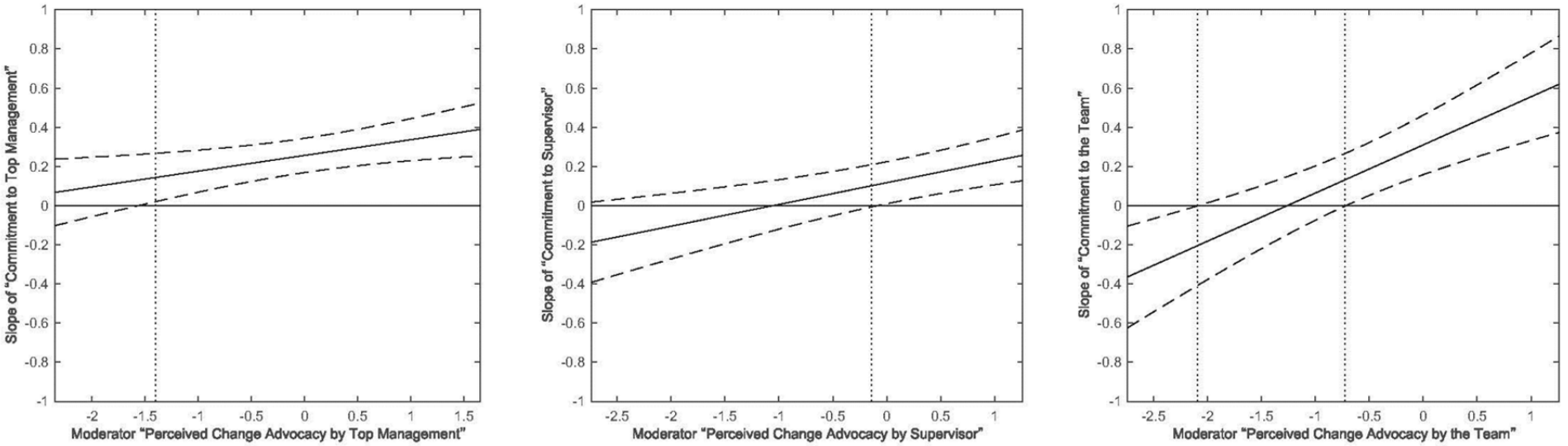

Figure 2. Commitment effects on change readiness across the range of possible change advocacy levels (means and 95%-CIs for conditional effects).
Notes. Vertical dotted lines represent the values above or below which the effect is significant (Johnson-Neyman Technique: regions of significance; cf., Hayes, 2013).

targets, higher commitment related to higher change readiness. Whereas higher change advocacy increased this positive association, lower change advocacy decreased it.

In fact, follow-up slope analysis showed that low change advocacy not only diminished the commitment–change readiness association. Instead, if change advocacy was below certain levels, commitment and change readiness were no longer significantly associated. That is, change readiness appears to depend not only on whether employees are committed to top management, supervisors, or workgroups, but additionally on whether they perceive these groups as advocating changes. When employees perceive that a commitment target advocates change, committing to that target increases change readiness. However, when a commitment target fails to support change, committing to that target makes no difference to one's change readiness.

Even more intriguing effects appear to operate for the workgroup target: Results suggest that the effects of commitment to one's workgroup on change readiness not only disappear if workgroup change advocacy is mediocre, but the effects of commitment on readiness even reverse, becoming negative, when perceived change advocacy is markedly low. The observation that commitment may turn from a resource into a threat for change readiness is in line with balance theory (Heider, 1958), but operated only at extremely low levels of workgroup change advocacy reported by very few participants in the present study.

In conclusion, the present study lends further support to the common suggestion in previous research that commitment is positively associated with employee change readiness (cf., Oreg et al., 2011). Extending current knowledge, results show that commitment to any of the specific organisational constituents that we examined, top management, supervisors, and workgroups, may contribute to change readiness. However, the present study is unique in demonstrating that the positive effects of employee commitment depend on how much the commitment target is perceived to advocate organisational changes. Overall, results should therefore encourage researchers and practitioners to consider commitments and change advocacies as collectives rather than uniquely.

Practical Implications

Results of the present study suggest that high levels of commitment relate to higher change readiness, especially if they are paired with change advocacy by commitment targets. In fact, commitments to supervisors or workgroups enhance employee change readiness only when employees perceive that supervisors and workgroups are at least moderately favourable of changes. From a practical perspective, this might suggest that interventions could be designed that encourage parties at lower levels of the organization to join change promotion, and to allow, enable, and provide the opportunities for them to do so.

However, findings offer more differential advice than to indiscriminately convince all organisational groups to advocate changes. Specifically, perhaps the most surprising finding was that change advocacy alone did not contribute to predicting change

readiness once commitment was accounted for. Instead, it further increased change readiness only if combined with commitment. Accordingly, change management may profit from identifying who employees presently commit to, and concentrate on gaining these groups' support, hence tailoring communication strategies and efficiently allocating resources. This approach could complement change-facilitating strategies for an immediately upcoming or ongoing change project (for a recent overview, see Rafferty et al., 2013).

In addition, findings of this study suggest a second approach with a more long-term perspective, targeting employee commitment. Again, the differential results and interactions offer advice to tailor interventions: Practitioners should especially seek to encourage commitment to those targets that will most likely advocate changes in the future. Organisations following this approach may not only potentially increase change readiness among employees, but also benefit from the many other positive effects of commitment (cf., Klein et al., 2012).

Overall, results suggest that practitioners must regard commitment as a resource for change. As such, our research directly opposes the reported practice that 'companies with major change initiatives actually take steps that reduce (often intentionally) identification, involvement, and loyalty' (Madsen et al., 2005, p. 217). This practice reflects the belief that to "unfreeze" the organisation and prepare for change, employees should no longer be attached to aspects of the past (cf., Lewin, 1947). The present findings suggest an important qualification of this notion, showing that commitment to the people within an organisation need not be diminished in order to facilitate changes, but instead may benefit change readiness if commitment targets perceivably advocate changes. Practitioners therefore need to walk a fine line between showing the need for change and showing respect for employees' emotional attachment to organisational constituencies. Most importantly, special efforts should be directed at gaining change support by commitment targets, for commitment and change advocacy to mutually facilitate change readiness.

Limitations and Suggestions for Future Research

This study has some limitations typical for empirical field studies investigating a novel research question. First, existing measures had to be adapted to the sample and study purpose, including translating the measures from English to German. However, a lot of effort was put into the translation to establish construct validity, including making as few changes as possible from the original published versions. Moreover, reliabilities of the final scales were quite high and factor analyses supported the expected factor structure. With respect to the two-factor structure of the change readiness measure, future studies could profit from following suggestions from the most recent review on change readiness (Rafferty et al., 2013), and extend the change readiness concept to include an affective subdimension. This addition seems especially promising in the current context, with affective employee commitment as a suggested antecedent.

A second concern is the use of self-reports, which poses the threat of common-method bias. However, self-reports were deemed appropriate because all study variables were subjective in nature and the study investigated intrapersonal processes (cf., Ostroff, Shin, & Kinicki, 2005). Moreover, results of Harman's one-factor test (29 percent of variance accounted for by the first factor; cf., Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and the substantially different factors found in CFA suggest that common-method variance effects were not sufficiently large to obstruct hypothesis testing (cf., Podsakoff & Organ, 1986; Swailes, 2004). Moreover, arguably the most interesting results of the study involved interactions among variables. In contrast to covariances, interaction effects are not inflated, but rather deflated by common-method bias (Siemsen, Roth, & Oliveira, 2010). Accordingly, instead of having been overestimated, moderations may have been underestimated in this study. Therefore, the directions of effects found in this study appear robust, although future research is needed to estimate the reliability of effect sizes.

The third concern is with generalizability. Although typical for the population of skilled manufacturing workers in Germany (Krings, 2011), the sample's unequal gender distribution may limit generalization to samples with higher percentages of women. However, there are no obvious reasons why gender should moderate the results observed in the present study. It appears to affect neither commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002) nor change readiness (Cunningham et al., 2002; Hanpachern et al., 1998). It has also not been shown to moderate relationships between commitment and change readiness. If anything, one might speculate that results could be even stronger for women, who are thought to express generally more collectivist values (Madson & Trafimow, 2001), and thus may more strongly align their change readiness levels with the change advocacies by commitment targets.

Moreover, cross-sectional field research typically cannot support strong causal inferences. The order of affects assumed in this study therefore must rely on former theory and research findings. Clearly, the present research underscores the need for additional work on the relationship between commitment and change readiness, extending the results reported here to other samples, other contexts, and longitudinal or experimental designs.

Future research is also needed to understand how the present findings apply to different change scenarios. Due to the present general change readiness conceptualization, findings may primarily apply to continuous changes that are promoted by top management as benefiting overall organisational performance. Additional research is needed to determine whether commitment and change advocacy play different roles in other kinds of change scenarios, such as disruptive or bottom-up changes, and to find out how their effects differ depending on the content and consequences of specific change initiatives (cf., Armenakis et al., 1993).

Conclusion

This study provides researchers and practitioners with new insights into predictors of employee change readiness. Results demonstrate that commitments to constituencies within the organisation—namely, top management, supervisors, and workgroup—relate positively to change readiness. However, moderation analyses revealed that the positive influences of commitments are most pronounced when combined with high perceivable change advocacy by commitment targets, and disappear if perceived change advocacy is low. Thus, commitment targets act as change agents and should receive special consideration when preparing a workforce for changes. Results are also of relevance to research on commitment itself, suggesting that there is unique value in conceptualizing commitment as a construct that reflects attachment to a specific target and to that specific target's goals. We hope the results of the present study encourage additional research into the role of commitment targets, and their advocacy for various organisational goals, including organisational change.

APPENDIX (to Study 2)

Scales used in this study, back-translated from German. Commitment and Perceived Change Advocacy scales were administered consecutively for each target, replacing [commitment target] by ‘top management’, ‘my direct supervisor’, and ‘my direct colleagues’, respectively. All scales were answered using a 5-point Likert scale anchored ‘strongly disagree’ to ‘strongly agree’.

Commitment

I feel emotionally attached to [commitment target].
[Commitment target] has a great deal of personal meaning for me.
I feel a strong sense of belonging to my [commitment target].

Readiness for Change

Change often helps to perform better.
Change usually helps improve unsatisfactory situations at work.
I usually benefit from change.
I often suggest new approaches to things.
I intend to do whatever possible to support change.

Perceived Change Advocacy

In my opinion, [commitment target] usually supports change processes unconditionally.
In my opinion, [commitment target] usually is willing to put energy into processes of change.
In my opinion, [commitment target] usually is convinced that change projects will solve problems at this site.
In my opinion, [commitment target] usually is actively involved with changes at this site.

2.4. Study 3: Does employee commitment within organizations follow commitment to the organization? A cross-lagged multi-target, multi-cohort study

Seggewiss, B. J. [1], Straatmann, T. [1], & Mueller, K. [1] (submitted). Does employee commitment within organizations follow commitment to the organization? A cross-lagged multi-target, multi-cohort study. *Journal of Organizational Behavior.*

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Abstract

This study investigates the influences between employees' commitment to the organization (global commitment) and their commitments to top management, supervisors, and workgroups (specific commitments). Based on role theory, hypotheses predicted top-down effects from global commitment onto the specific commitments, with stronger effects on commitment to targets that are higher in the line of authority. Furthermore, effects for tenured employees were predicted to differ from those observed in low-tenured employees. Data from a demographically stratified two-wave panel study (N = 312) supported the expected top-down effects and no bottom-up effects between global and specific commitments. However, effects did not significantly differ across targets. Multi-group analyses across three cohorts of employees with low, medium, and high tenure confirmed all top-down effects in the low-tenure group, whereas the more tenured employees' commitments to supervisor and to workgroup were not influenced by global commitment. Results imply that commitment develops from an initially predominant global commitment into increasingly independent bonds. Theoretically, this process may be the result of accumulating interaction experiences, causing tenured employees to increasingly subcategorize specific commitment targets and cognitively separate them from the organization. From a practical perspective, results suggest that global commitment represents an important lever to commitments of low-tenured employees.

Keywords: organizational commitment, supervisor commitment, workgroup commitment, commitment interrelations, role theory

Does employee commitment within organizations follow commitment to the organization? A cross-lagged multi-target, multi-cohort study

Employee commitment is among the most prominent constructs in organizational research. It designates a special kind of bond, created by the employees' voluntary choice to dedicate themselves to and take on responsibility for a particular target in the organization (Klein, Molloy, & Brinsfield, 2012). Commitment has been linked to "almost any behavior that is beneficial to the organization" (Riketta, 2002, p. 257), and is therefore highly relevant for organizational success (Chew & Entrekin, 2011). Consequently, today's organizations seek ways to attain and maintain high employee commitment, and researchers seek to better understand how commitment forms and develops. As researchers acquired an increasingly deeper understanding of employee commitment, they found that it can be directed toward multiple different targets in organizations (Reichers, 1985). Specifically, employees not only commit to the organization as a whole (i.e., global commitment). But they also hold separate, yet interrelated commitments to the organization's more proximate constituents, such as top management, supervisors, and workgroups (i.e., specific commitment; e.g., Becker, 1992; Stinglhamber, Bentein, & Vandenberghe, 2002). These specific targets are nested within the global organization. As a consequence, the specific and global forms of commitment are believed to influence each other (Klein et al., 2012; Reichers, 1985). However, the direction and strength of these influences is highly debated. In fact, researchers have proposed directly opposing models of these influences. For example, Yoon, Baker, and Ko (1994) and Hunt and Morgan (1994) suggested that specific commitments influenced global commitment (bottom-up), so that organizations could foster specific commitments in order to achieve an overall committed workforce. In contrast, Bentein, Stinglhamber, and Vandenberghe (2002) suggested the reverse, namely that global commitment influenced specific commitments (top-down) and was hence the key to higher employee commitment. Identifying which model best reflects the influences between commitments is essential to gaining a deeper understanding of employee commitment and its multi-target composition. In particular, insights into these influences should provide important information about how the different commitments form and develop, and what kinds of positive or negative spillover effects between commitments practitioners need to be aware of.

However, only recently have Vandenberghe, Bentein, and Panaccio (2014) presented a first cross-lagged test of the influences between global commitment and specific commitment that could help to answer the questions about their causal relations. Results suggested that global commitment to the organization precedes specific commitment to the supervisor. As such, they give preliminary support to the role-theory based explanation of interrelations between employee commitments (Bentein et al., 2002; Katz & Kahn, 1978; Vandenberghe et al., 2014). According to this explanation, employees need to first accept the organization's goals and values in order to then accept the roles which the organization assigns to its constituents (e.g., managers, supervisors, and workgroups). As a consequence, employees' global commitment to the

organization is argued to precede specific commitment to any role within the organization. Against the first cross-lagged findings by Vandenberghe et al. (2014), role theory appears as a promising theoretical framework for explaining the psychological processes between employees' commitments. However, several important questions remain that need to be answered in order to use role theory as a fruitful approach for improved understanding and management of commitments.

The present study addresses these issues and contributes to the existent literature in several important ways. On the one hand, it aims to replicate Vandenberghe et al.'s (2014) first findings in a more stratified cross-organizational sample. On the other hand, it additionally makes three highly relevant extensions beyond their study.

First, Vandenberghe et al. (2014) showed that global commitment preceded commitment to the supervisor. However, role theory suggests that global commitment precedes commitment to any role within the organization. Therefore, the present study tests whether the direction of influences is the same (i.e., also top-down) between global commitment and commitments to other important roles within the organization. Specifically, the study extends the previous focus beyond commitment to the supervisor by additionally studying global commitment influences onto the specific commitments to top management and to teams.

Second, the present study takes this multi-target perspective a step further and compares the influences across these targets. Specifically, the study theoretically derives and tests hypotheses about how the influences between global and specific commitments might vary in strength, depending on the roles and functions of the specific commitment targets.

Third, Vandenberghe et al. (2014) point out that their empirical evidence was based on low-tenured employees, so that their results may primarily reflect processes at employees' earlier organizational career stages. Because low-tenured employees usually constitute a smaller part of an organization's workforce, it appears highly relevant to also understand the commitment processes within more tenured employees. Consequently, the present study develops hypotheses about how the influences between global and specific commitments may differ between employees with low, medium, and high tenure and tests them using a multi-cohort design.

Taken together, the present study extends beyond former research by testing 1) whether the direction of influences between global and specific commitments is generalizable across different targets, 2) how the strength of influences varies across targets, and 3) whether influences differ between groups of employees with different tenures. All of these tests are theoretically embedded in the framework of role theory. As a consequence, insights gained from this approach should contribute to providing a comprehensive theoretical framework for the influences between employees' commitments. In addition, the study informs about influences between employees' commitments in different phases of the employee organizational career. Thus, it should also help practitioners to tailor commitment-promoting interventions to different groups of employees and savor the many beneficial effects of an overall committed workforce.

Interrelations between global and specific forms of commitment

Today's multi-target conceptualization of commitment is largely founded on the work of Reichers (1985). Drawing from organization theory, she (Reichers, 1985) was one of the first scholars to argue that organizations are coalitional entities, comprised of numerous groups and individuals who can all attract specific commitments from employees. Rather than simply summing up to one overall commitment to the organization, these additional commitments complement the concept of organizational commitment in a way that it is "most accurately understood as a general (global) *and* a specific (commitments to one or more constituencies) construct" (Reichers, 1986, p. 513; emphasis in original). The structure of organizations entails that the targets of specific commitment (such as supervisors or workgroups) are nested within the target of global commitment (i.e., the organization as a whole). Due to this nestedness, employees' specific and global commitments are not independent of each other, but interrelate (Bentein et al., 2002; Meyer & Allen, 1997). Indeed, numerous empirical studies and meta-analyses report positive associations between specific and global commitments (Mathieu & Zajac, 1990; Swailes, 2004).

Hunt and Morgan (1994), as well as Yoon et al. (1994) were among the first to test models that contained directed effects between specific and global commitments. Both studies suggested bottom-up effects, so that specific commitments should contribute to global commitment. However, the two studies offered different theoretical foundations. Hunt and Morgan (1994) built on the congruence model of organizations (Nadler & Tushman, 1988). It states that components of effective organizations hold congruent values. Accordingly, specific commitment targets should hold values that are consistent with the values of the global commitment target, the organization. Based on this proposition, Hunt and Morgan (1994) argued that because shared values played "a prominent role [...] in the development of all forms of commitment, constituency-specific commitments should contribute to global organizational commitment" (p. 1571). Conversely, Yoon et al. (1994) based their model on Festinger, Back, and Schachter's (1950) cohesion approach. It states that groups with strong interpersonal attachment among group members are more cohesive. Based on this approach, Yoon et al. (1994) hypothesized that commitment to specific targets increases group cohesiveness within the organization, and as a result specific commitment enhances commitment to the organization. Both Hunt and Morgan (1994) and Yoon et al. (1994) found that their models of positive bottom-up effects fit their data better than competing models of independence (Hunt & Morgan, 1994) or models assuming negative effects (Yoon et al., 1994). From these results, they inferred support for the hypothesized bottom-up effects from specific to global commitment.

However, Bentein et al. (2002) questioned this conclusion. Their main concern was that the previous studies had not compared their models of bottom-up effects against the reverse direction of top-down effects. In fact, drawing on the same theoretical foundation as Hunt and Morgan (1994)—the congruence model of organizations (Nadler & Tushman, 1988)—, Bentein et al. (2002) developed a perfectly reversed model with

top-down influences from global commitment onto specific commitment. Specifically, they argued that congruent values and commitments within organizations may not necessarily evolve from the "parts" to the "whole". But instead, organizational congruence may be the result of values and commitment generalizing from the organization to its members, "with commitment to the whole reinforcing commitment to the parts" (Bentein et al., 2002, p. 356). And indeed, Bentein et al. (2002) as well as a following study by Vandenberghe, Bentein, and Stinglhamber (2004) found support for models suggesting top-down effects.

Accordingly, at this point in commitment research, neither did the theoretical foundation indisputably favor one of the two suggested directions over the other, nor did the cross-sectional study designs allow to draw a solid empirical conclusion on how global and specific commitments influence each other. Now recently, Vandenberghe et al. (2014) took a first step toward resolving these issues. By drawing on role theory (Katz & Kahn, 1978), they presented a theoretical foundation that makes specific suggestions on the temporal order and causal influences between global and specific commitment. Specifically, Vandenberghe et al. (2014) argued that organizations are social systems which prescribe certain roles for their members. In the sense of structural functionalism (Merton, 1957), the organization shapes these roles in a way ensuring that its needs and goals will be met (Sluss & Ashforth, 2007). Against this background, Vandenberghe et al. (2014) argued that employees can only commit to someone occupying a role within the organization if they accept this person's role-based identity (Sluss & Ashforth, 2007) as legitimate. As this identity is defined so as to meet the organization's needs and goals (Sluss & Ashforth, 2007), accepting it also requires that employees have accepted the organization's goals. Consequently, Vandenberghe et al. (2014) argued that specific commitments can only develop subsequent to having established commitment to the global organization, because it requires the employee to accept the organization's goals and expectations toward its constituents.

Vandenberghe et al. (2014) hence provided a theoretical background that decidedly suggests top-down effects from global to specific commitments. In addition, they were the first to test the directionality in a cross-lagged panel design. Specifically, they tested top-down effects against bottom-up effects across three waves, using commitment to the supervisor as one exemplary form of specific commitment. Indeed, they found that global commitment to the organization temporally preceded commitment to the supervisor. In contrast, they did not find recursive effects of commitment to supervisor on global commitment to the organization. Accordingly, their results supported top-down effects, and rejected bottom-up effects between commitment to the organization and commitment to the supervisor.

Together, the strong theoretical background and the longitudinal empirical support suggest that top-down effects may best represent how global and specific commitments relate to each other over time. Yet so far, cross-lagged empirical support has been provided only for top-down effects of global commitment on commitment to supervisor. In contrast, no cross-lagged research has been conducted that could inform about top-down effects onto specific commitments to other organizational constituents. However,

role theory suggests that commitment to the organization "comes first and precedes the development of commitment to any role embedded in the organization" (Vandenberghe et al., 2014, p. 6). Consequently, in order to test whether this general proposition is justified, empirical investigations need to examine the cross-lagged effects of global organizational commitment on specific commitments to multiple other roles within organizations. Besides supervisors, the most prominent roles that constitute specific commitment targets within organizations are top managers and co-workers in workgroups (cf., Becker & Billings, 1993; Reichers, 1985).And parallel to prescribing the roles of supervisors, organizations also prescribe the roles of top management and workgroups (Katz & Kahn, 1978). Consequently, the role theory explanation arguably proposes that commitment to the organization should also precede commitment to top management and workgroups; hence making top-down effects the dominant direction of influences between global and specific commitments to various targets.

Accordingly, the present study hypothesizes:

Hypothesis 1. Global commitment to the organization positively influences subsequent specific commitment to a) top management, b) the supervisor, and c) the workgroup.

Proposing different strengths of top-down effects depending on the commitment target

Generally, the role theory explanation suggests that commitment to the organization influences commitment to all targets within the organization. However, the top-down effects need not be equally strong for each target. Instead, the principle of line of authority embedded into role theory (Rizzo, House, & Lirtzman, 1970) can be argued to suggest that commitment to the organization influences some specific commitments more than others. More precisely, commitment to the organization could have stronger effects on commitment to targets which are higher in the line of authority, while having weaker effects on commitment to targets which are lower in the line of authority (cf., Hunt & Morgan, 1994).

Among the commitment targets in this study, top management is highest in the line of authority. It officially represents and takes decisions for the overall organization. Accordingly, employees likely associate top management's role most strongly with the overall organization. Furthermore, the hierarchy in organizations causes most employees to experience top managers predominantly in their formal role (Mintzberg, 1979), which is prescribed by the organization. Therefore, commitment to the organization should have particularly strong effects on commitment to top management.

In comparison, supervisors are lower in the line of authority and more proximate to employees (Becker & Billings, 1993; Reichers, 1985). Consequently, employees likely perceive supervisors not only in the role prescribed to them by the organization. Specifically, role theory and social identity theory jointly suggest that any role occupants' role-based identity is complemented by a person-based identity, which is shaped in part during interactions (Sluss & Ashforth, 2008). Due to most organization's hierarchical

structures, interactions between supervisors and employees are usually more frequent and more personal than employee interactions with top management. Therefore, the supervisors' person-based identities may be more visible to employees, with the result that employees experience more facets of supervisors extending beyond organizationally prescribed roles. Therefore, commitment to the organization could have lesser influence on commitment to the supervisor than on commitment to top management.

Finally, workgroups are at the same authority level as employees. Therefore, an employee's relation with the workgroup usually is not a formally managed dependent relation in the organizational hierarchy (cf., Mintzberg, 1979). Consequently, employees' relations with their workgroups may represent more personalized, informal relations in which coworkers frequently transcend the organizationally prescribed roles (cf., Sluss & Ashforth, 2007). This may result in an overall weakest effect of global commitment to the organization onto commitment to workgroups compared to its effects on commitment to top management and commitment to supervisor.

Previously reported cross-sectional associations between global and specific commitment fit these propositions. Specifically, multi-target commitment studies by Becker (1992) and Swailes (2004) reported that commitment to the organization correlated strongest with commitment to top management, less strongly with commitment to supervisor, and weakest with commitment to workgroup.

In conclusion, role theory and cross-sectional research suggest that the hypothesized top-down effects of global onto specific commitments could differ in strength. Against this background, the present study argues that global commitment to the organization should have the strongest effects on commitment to top management, followed by comparably less strong effects on commitment to supervisor, and weakest effects on commitment to workgroup.

It is therefore hypothesized:

Hypothesis 2. The top-down effects of global commitment to the organization are strongest on commitment to top management, less strong on commitment to supervisor, and weakest on commitment to workgroups.

Proposing different strengths of bottom-up effects depending on employee tenure

Following the role theory argumentation, the influences between global and specific commitments should generally work top-down, that is, global commitment should influence subsequent specific commitment. However, the dominant role of global commitment to the organization may change over time, and bottom-up effects may become increasingly relevant. Specifically, after employees have entered the organization, their relations with the specific commitment targets are further refined in day-to-day interaction experiences in the workplace (cf., Lawler, 1992). As laid out above, the specific commitment targets reveal their person-based identities in these interactions by the ways in which they personally enact the official roles given to them (Sluss & Ashforth, 2007). These experiences should add to shaping employees' specific commitments (cf., Mueller & Lawler, 1999). And they could, in turn, reflect onto global

commitment to the organization, because organizational constituents such as supervisors and workgroups represent (Eisenberger et al., 2010) or even substitute (Levinson, 1965) the overall organization toward employees. As a result, employees may come to attribute characteristics which they experience within these specific targets as well as relations with these targets to the overall organization. And likewise, specific commitment to these targets may increasingly reflect onto and shape global commitment to the organization which they represent (Vandenberghe et al., 2014).

Because the study by Vandenberghe et al. (2014) was based on a sample of low-tenured employees, there is as yet no cross-sectional research that could inform about the processes among more tenured employees, and whether or not they follow the same direction. Closing this gap, the present study proposes and tests differences in commitment interrelations between groups of employees with different tenures. Specifically, it is proposed that commitment interrelations may initially start out as top-down processes, as low-tenured employees first develop global commitment to the organization and build specific commitments against this background. These top-down processes may continue to work as employees become increasingly tenured, because the organization continues to define the roles for specific commitment targets. But in addition, bottom-up processes may emerge that complement the top-down processes among employees with higher tenure, who perceive their organization primarily via top management, supervisors, and workgroups as proximate representatives of the overall organization. It is therefore hypothesized:

> *Hypothesis 3. Whereas top-down influences from global onto specific commitments prevail in low-tenured employees, bottom-up effects from specific commitments to global commitment increase and complement the top-down effects in employees with higher tenure.*

Method

Sample and procedure

The study used a two-wave cross-lagged panel design. The time interval between waves was six months, an interval that had allowed observing top-down effects in previous research (Vandenberghe et al., 2014). 1,000 participants of an online panel were surveyed at time 1. The panel was specifically set up for a larger commitment research project by aid of a German market research institute (Gesellschaft für Konsumforschung, GfK)[3]. Participants were recruited according to three criteria. First, all participants were contracted employees and had been working with their current employers for at least one year prior to data collection. This criterion ensured that participants had passed their initial stage of employment with severe diverse variations in commitment levels (Meyer & Allen, 1991) and had gained enough experience with all

[3] The organizational commitment, supervisor commitment, and workgroup commitment data from the first wave have been used in a previous article, specifically in (reference omitted for blind review). The data from the second wave were newly collected for the present research.

commitment targets to develop a sense of belonging relevant for commitment (Gao-Urhahn, Biemann, & Jaros, 2016). Second, participant age was evenly distributed between legal age and statutory retirement age; and third, places of residence and gender aimed to reflected the corresponding distributions in Germany in order to increase the generalizability of results. Participation was anonymous, preceded by informed consent, and gratified with a small incentive within the regular online panel gratification system.

Data were screened for insufficient effort responding (IER), following suggestions by Huang, Curran, Keeney, Poposki, and DeShon (2012) and Johnson (2005). This led to excluding 186 participants with response times below an average of 2 seconds per item, more than 90 percent of consecutively identical answers, or individual reliabilities below r = .30 or at r = 1. Of the 814 remaining participants, 442 participated in the second wave (54.3%). IER analyses for this second wave led to excluding 62 participants. Additionally, 54 participants were excluded because they indicated a change in organization, supervisor, or the majority of their workgroup between waves. Logistic regression tested whether attrition between waves was related to any study variables. Results showed that the probability of participating again in the second wave was slightly higher among older participants, but all other variables were unrelated to attrition (χ^2 = 132.08, df = 7, p < .001; b_{age} = .072, p < .001). Finally, data was screened for multivariate outliers with high influence on commitment regressions, following the recommendations and cutoffs suggested by Fox (1991). 14 cases were excluded because they were outliers (indicated by a studentized residual above the critical Bonferroni-corrected t-value $t_{df = 317,\ p = .01}$ = 2.58), had high leverage (above two times the average value), and their Cook's D exceeded the size-adjusted numerical cutoff suggested by Chatterjee and Hadi (1986)[4]. The final sample of complete cases across the two waves consisted of N = 312 participants. Their ages ranged from 22 to 65 (M = 46.22, SD = 10.92), tenures from 1 to 48 years (M = 13.13, SD = 10.84); 163 identified as female, 149 as male.

Measures

Commitment to the four targets organization, top management, supervisor, and workgroup was measured using four strictly parallel scales. The scales were developed by Seggewiss (2011) based on Allen and Meyer's (1990) affective commitment scale and following suggestions by Klein et al. (2012) for multi-target commitment research. Each scale consisted of the three items "I feel a strong sense of belonging to my [commitment target]", "I feel emotionally attached to my [commitment target]", and "[My commitment target] has a great deal of personal meaning for me", measured on a 7-point Likert scale. All items were translated into German using a translation–back-translation procedure with two bilingual researchers. Reliability in the sample was high, with Cronbach's alpha for commitment to the organization .970 (time 1) and .964 (time 2), for commitment to top management .977 (time 1) and .973 (time 2), for commitment to the supervisor .983 (time

[4] A replication of analyses based on a sample that was not screened for outliers returned results with changes in some estimates, but did not change the overall conclusions. Specifically, top-down effects were still found primarily within low-tenured employees and decreased with tenure, while there was no support for bottom-up effects in any subsample.

1) and .980 (time 2), and for commitment to the workgroup .982 (time 1) and .972 (time 2). Confirmatory factor analyses of the four factor commitment model showed acceptable fit at both measurement occasions (time 1: χ^2 = 167.744, *df* = 48, *p* < .001, RMSEA = .089, CFI = .982, TLI = .975; time 2: χ^2 = 269.929, *df* = 48, *p* < .001, RMSEA = .122, CFI = .964, TLI = .950).

Analysis

Data were analyzed using longitudinal structural equation modeling (SEM) with maximum likelihood estimation based on the variance-covariance matrices and employing the MPlus software package, version 7.3 (Muthén & Muthén, 2014). Analyses comprised two series of model estimations. The first series was a single-group SEM investigating commitment interrelations in the entire tenure-diverse sample. The second series was a multi-group SEM comparing commitment interrelations across three tenure groups. Groups were created by splitting the sample into the sub-samples “low tenure” (1–5 years, N_{low} = 105), “medium tenure” (6–15 years, N_{medium} = 103), and “high tenure” (> 15 years, N_{high} = 104). The measurement model was the same in the full sample as well as within each tenure subsample. It contained four factors per time representing commitment to the organization, to top management, to supervisor, and to workgroup. Each commitment factor had three indicators. Factor metric was defined using the effects coding method of identification (Little, 2013). Error terms of parallel items were allowed to correlate across times. Phantom constructs were used for all eight commitment factors to convert covariance information into estimates of correlations and allow direct tests of differences in latent parameters across times and groups (Little, 2013). Accordingly, the model contained a total of 16 factors.

Both the full-sample SEM as well as the multi-group SEM series started with tests of measurement invariance across times, and additionally across groups in the multi-group SEM. Three types of measurement invariance were tested consecutively: configural invariance (i.e., the pattern of fixed and free parameters is equal across measurement occasions, and across groups, respectively), weak factorial invariance (i.e., corresponding factor loadings are also equal across measurement occasions, and groups, respectively), and strong factorial invariance (i.e., corresponding indicator means are also equal across measurement occasions, and groups, respectively; Little, 2013). Models testing measurement invariance were not estimated based on the χ^2 difference test, because it is “too sensitive to trivial fluctuations and differences in the context of invariance testing” (Little, 2013, p. 155). Instead, following Little (2013), the imposed constraints were considered tenable if the respective model’s RMSEA was within the previous model’s RMSEA 90% confidence interval and ΔCFI did not exceed 0.01.

After measurement invariance was established, invariance constraints were included in all subsequent analyses. Next, latent within-time parameters were tested for stability across measurement occasions (and groups, respectively) by first constraining latent variances and covariances, then constraining latent means to equality across times (and groups, respectively). Again following Little (2013), these models were evaluated using the χ^2 difference test compared to the measurement invariance model at a 1% α-level. If constraints led to a significantly decreased χ^2, follow-up analyses identified the

parameters that differed across times (or groups, respectively) by successively relaxing constraints on them until the most restrictive model was determined that did not significantly deviate from the measurement invariance model.

Finally, nested structural models tested the longitudinal associations between commitments. The initial SEM model was followed by a cross-lagged model containing the proposed cross-lagged effects between global and specific commitments (Hypothesis 1). Specifically, the model contained top-down effects from global commitment to the organization at the first measurement occasion onto specific commitments to top management, supervisor, and workgroup at the second measurement occasion, and bottom-up effects from these specific commitments at the first measurement occasion onto global commitment to organization at the second measurement occasion. In the full-sample SEM, a final model tested whether the top-down effects from global onto specific commitments differed in strength, as proposed in Hypothesis 2, by constraining these effects to equality. In the multi-group SEM testing Hypothesis 3, the cross-lagged model constrained the top-down and bottom-up effects to equality across groups to test whether they differed across groups. If this resulted in a significantly decreased model fit, less restrictive models were estimated to identify the group that differed (cf., Little, 2013). Specifically, these models relaxed the cross-lagged equality constraints in one group at a time until the most parsimonious model was determined that did not significantly deviate from the initial SEM model. The criterion for evaluating model change was the χ^2 difference test for nested models, using a 1% α-level.

Results

Descriptives and correlations

Commitment to workgroup was the highest commitment at both measurement occasions (M_{T1} = 5.590; M_{T2} = 5.643), followed by commitment to organization (M_{T1} = 5.251; M_{T2} = 5.212), commitment to supervisor (M_{T1} = 4.756; M_{T2} = 4.670), and commitment to top management (M_{T1} = 4.505; M_{T2} = 4.415; Table 1). This order is consistent with previous research (e.g., Becker, 1992). Commitment means did not significantly differ across measurement occasions (t between .768 and 1.434, n.s.). A significant correlation between sex and tenure (r = -.222, p < .01) showed that women had lower tenure on average, a result typical for the German working population (Statistisches Bundesamt, 2016). Demographic variables were not related to commitment, except for a small correlation between age and commitment to workgroup at Time 2 (r = .120, p < .05). This is also in line with previous research, which typically reports no or only weak correlations of age, sex, and tenure with commitments (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Swailes, 2002). In contrast and as expected (cf., Vandenberghe et al., 2014), all commitment variables were substantially correlated across times and targets (Table 1).

Table 1. Descriptives, reliabilities, observed correlations, and estimated correlations between study variables in the entire sample

				Time 1						Time 2			
	Variable	M	SD	2	3	4	5	6	7	8	9	10	11
Time 1													
1	Age	46.220	10.920	-.042	.347**	.003	.056	-.041	.001	.024	.046	-.033	.120*
2	Sex				-.222**	-.050	-.032	-.034	-.037	-.021	-.060	-.056	-.053
3	Tenure	13.130	10.836			.046	-.034	-.040	.021	-.011	-.084	-.014	.029
	Commitment to												
4	organization	5.251	1.356			(.970)	.805**	.702**	.702**	.776**	.643**	.583**	.589**
5	top management	4.505	1.552			.827**	(.977)	.743**	.553**	.692**	.747**	.628**	.494**
6	supervisor	4.756	1.631			.717**	.757**	(.983)	.623**	.595**	.609**	.770**	.540**
7	workgroup	5.643	1.314			.719**	.562**	.633**	(.982)	.557**	.463**	.507**	.755**
Time 2													
	Commitment to												
8	organization	5.212	1.360			.801**	.713**	.612**	.572**	(.964)	.798**	.722**	.659**
9	top management	4.415	1.588			.665**	.765**	.623**	.473**	.826**	(.973)	.780**	.566**
10	supervisor	4.670	1.632			.601**	.644**	.783**	.515**	.745**	.799**	(.980)	.618**
11	workgroup	5.590	1.247			.609**	.504**	.549**	.764**	.683**	.585**	.634**	(.972)

Note. M = mean, SD = standard deviation. $N = 312$.
Reliabilities are given in parentheses along the main diagonal.
Means, standard deviations, and correlations above the diagonal are observed; correlations below the diagonal are freely estimated latent parameters. Estimation results are based on the effects coded method of identification with the loadings and indicator means invariant across time (strong factorial invariant model). Phantom constructs were used to convert covariance information into estimates of the correlations among constructs and their respective latent standard deviations.
* $p < .05$.
** $p < .01$.

Table 2. Model fit statistics for the tests on the entire sample across two waves

Model	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	*p*	RMSEA	RMSEA 90% CI	CFI	ΔCFI	TLI	ΔTLI	Pass?[1]
Null model	3133.248	280	< .001	–	–	–	.181	.175 - .186	.790	–	.793	–	–
Measurement model estimates													
Configural invariance	601.664	212	< .001	–	–	–	.077	.070 - .084	.971	–	.963	–	Yes
Weak invariance	605.336	220	< .001	–	–	–	.075	.068 - .082	.972	.001	.964	.001	Yes
Strong invariance	614.207	228	< .001	–	–	–	.074	.067 - .081	.972	.000	.966	.002	Yes
Latent model estimates													
Variance-covariance stabilities	624.786	238	< .001	10.579	10	.391	.072	.065 - .079	.972	.000	.967	.001	Yes
Latent means stabilities	617.082	232	< .001	2.875	4	.579	.073	.066 - .080	.972	.000	.966	.000	Yes
Longitudinal structural models													
Initial SEM	614.207	228	< .001	–	–	–	.074	.067 - .081	.972	–	.966	–	Yes
Top-down and bottom-up effects	620.014	234	< .001	5.807	6	.445	.073	.066 - .080	.972	.000	.966	.000	Yes
Equality of top-down-effects	620.476	236	< .001	0.462	2	.794	.072	.065 - .079	.972	.000	.967	.001	Yes

Note. $N = 312$.
Models are based on the effects coded method of identification and phantom constructs were used to convert covariance information into estimates of the correlations among constructs and their respective latent standard deviations.
Longitudinal structural models are based on the strong factorial invariance model.
[1] The criterion for determining too much loss in fit for the measurement models was ΔCFI greater than .001, or an RMSEA that falls outside the RMSEA 90% confidence interval (CI) of the strong invariance model, following Little (2013). For all other models, the criterion for determining too much loss in fit was a significant change in χ^2 at $\alpha = .01$.

Full-sample SEM

The first series of SEM tested cross-lagged associations between commitments in the full sample in order to test for top-down effects from global to specific commitments as proposed in Hypothesis 1. Tests of measurement invariance showed that the assumption of strong factorial invariance across times was met (Table 2). Furthermore, latent variances and covariances and latent means appeared stable across times ($\Delta\chi^2$ = 10.579, Δdf = 10, p = .391 for stability of variances and covariances; $\Delta\chi^2$ = 2.875, Δdf = 4, p = .579 for stability of means). The proposed structural model containing top-down and bottom-up effects between global and specific commitments showed good fit to the data (χ^2 = 620.014, df = 234, p < .001, RMSEA = .073, CFI = .972, TLI = .966). All top-down effects were significant (Figure 1); that is, commitment to the organization at Time 1 (CO1) significantly predicted Time 2 commitment to top management (CM2), to supervisor (CS2), and to team (CT2; $b_{CO1–CM2}$ = 0.275, p < .01; $b_{CO1–CS2}$ = 0.217, p < .01; $b_{CO1–CT2}$ = 0.207, p < .05). In contrast, no bottom-up effect reached significance ($b_{CM1–CO2}$ = 0.160; $b_{CS1–CO2}$ = -0.033; $b_{CT1–CO2}$ = -0.020, all *n.s*).

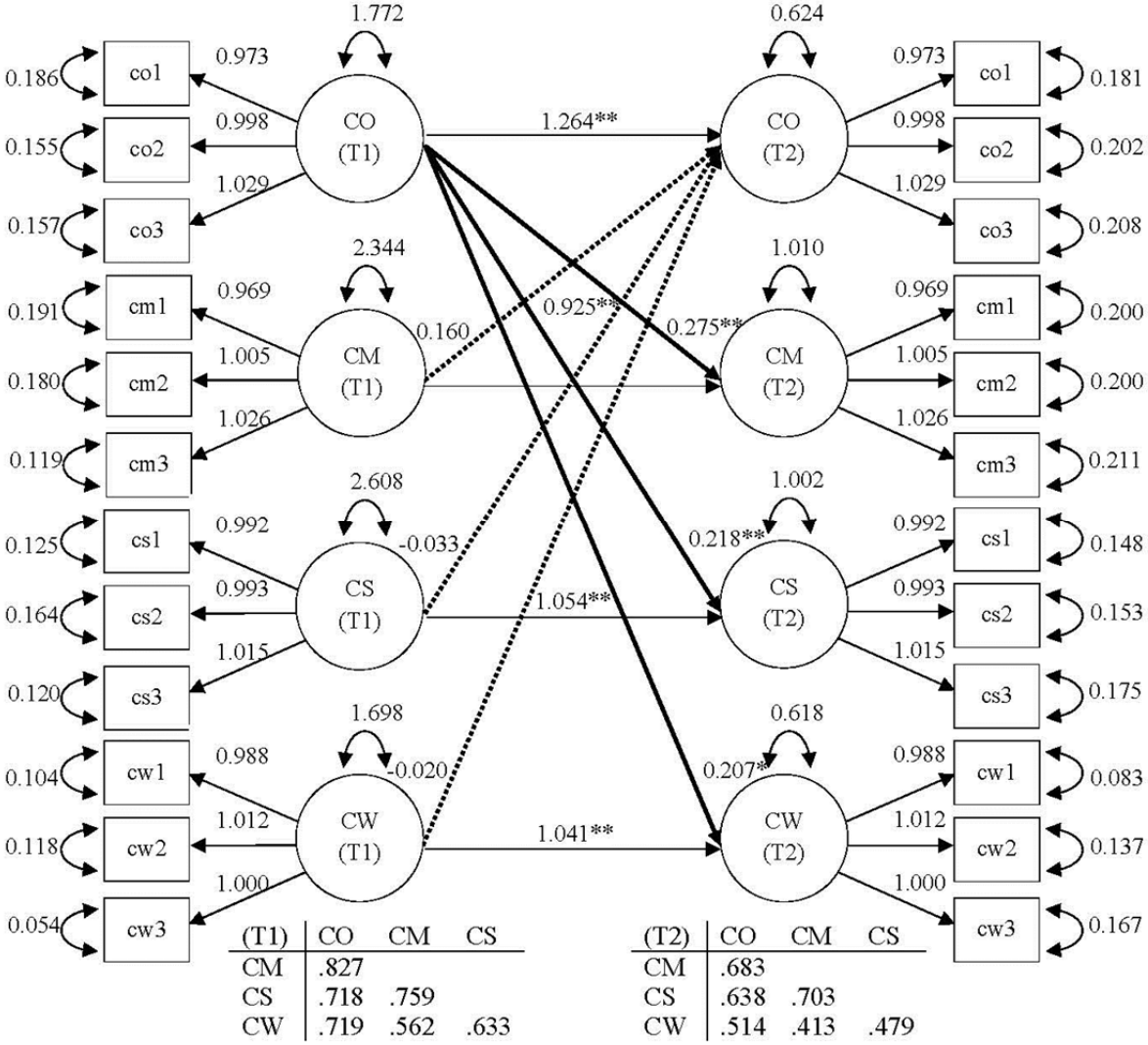


Figure 1. Cross-lagged effects between commitments in the full sample

Note. T1 = First measurement occasion, T2 = Second measurement after 6 months. CO = Commitment to organization, CM = Commitment to Management, CS = Commitment to Supervisor, CW = Commitment to Workgroup. Model estimation was based on the effects coded method of identification with the loadings invariant across time (strong factorial invariant model).
Tables display within-time correlations between commitments.

A final full-sample model tested Hypothesis 2, which proposed that top-down effects differed in strength, by constraining all top-down effects to equality. Contrary to expectations, this constraint did not result in a significant decrease in model fit ($\Delta\chi^2$ = 0.462, Δdf = 2, p = .794). Accordingly, top-down effects were significant, but did not significantly differ in strength.

Multi-group SEM

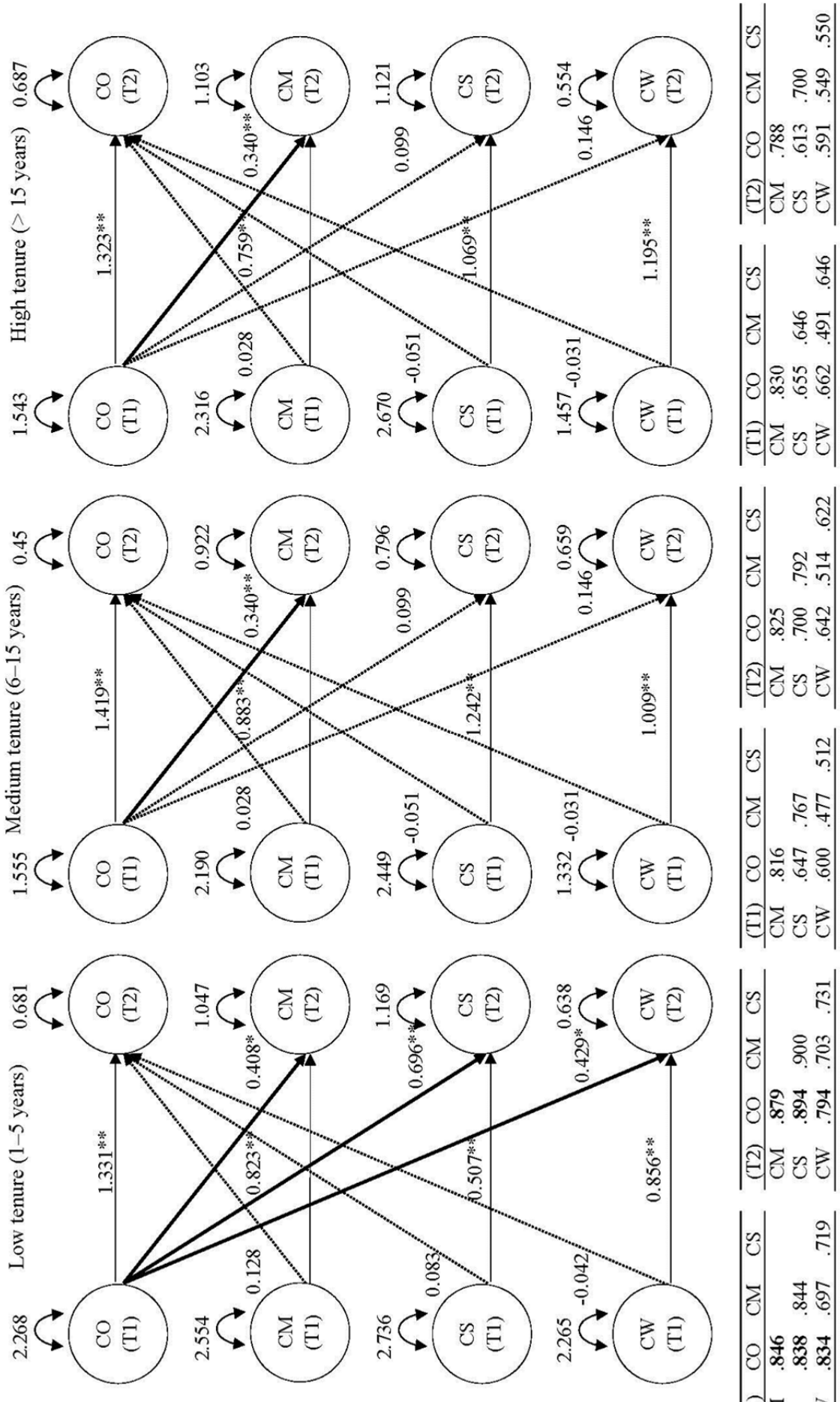
A second series of SEM tested Hypothesis 3, which proposed different commitment interrelations between employees with different tenures. Specifically, a series of multi-group SEM tested cross-lagged associations between commitments in the three subsamples “low tenure”, “medium tenure”, and “high tenure”. Tests of measurement invariance showed strong factorial invariance across times and groups (Table 3). Tests of latent model estimate stabilities showed that variances and covariances were stable across time ($\Delta\chi^2$ = 51.543, Δdf = 40, p = .104), but not across groups ($\Delta\chi^2$ = 91.049, Δdf = 40, p < .01). Follow-up analyses indicated that the low-tenure group differed from the two other groups with regard to correlations with commitment to organization. Specifically, all correlations between global commitment and each of the specific commitments were higher in the low-tenure subsample (Figure 2). In contrast, latent means neither differed across time nor groups ($\Delta\chi^2$ = 24.794, Δdf = 20, p = .114). The structural model that included top-down and bottom-up effects between commitments but constrained them to equality across groups showed significantly decreased model fit relative to the initial SEM ($\Delta\chi^2$ = 53.427, Δdf = 30, p < .01). This suggested that the cross-lagged effects differed between groups. Accordingly, follow-up analyses were performed to identify the group(s) that differed. They revealed that the best-fitting model was the one assuming that cross-lagged effects differed only in the low-tenure group, but were equal in the medium- and high-tenure groups (χ^2 = 1364.547, df = 740, p < .001, RMSEA = .090, CFI = .955, TLI = .950; compared to model fit for models assuming that only the medium-tenure group differed: χ^2 = 1378.288, df = 740, p < .001, RMSEA = .091, CFI = .954, TLI = .949; only the high-tenure group differed: χ^2 = 1371.106, df = 740, p < .001, RMSEA = .091, CFI = .955, TLI = .950; all three groups differed: χ^2 = 1360.484, df = 734, p < .001, RMSEA = .091, CFI = .955, TLI = .950). Moreover, this model did not significantly change model fit relative to the initial SEM model ($\Delta\chi^2$ = 36.290, Δdf = 24, p = .051) despite being more parsimonious. Consequently, it was retained as final model (Table 3).

Path coefficients for the three groups (Figure 2) showed that all top-down effects were significant in the low-tenure group ($b_{CO1–CM2}$ = 0.408, p < .05; $b_{CO1–CS2}$ = 0.696, p < .01; $b_{CO1–CT2}$ = 0.429, p < .05). In contrast, the common estimation results for the two other groups showed only one significant top-down effect from commitment to organization onto commitment to top management ($b_{CO1–CM2}$ = 0.340, p < .01), whereas the other two top-down effects were not significant ($b_{CO1–CS2}$ = 0.099, $b_{CO1–CT2}$ = 0.146; both *n.s*). Contrary to top-down effects, bottom-up effects were not significant in any of the three groups ($b_{CM1–CO2}$ = 0.128, $b_{CS1–CO2}$ = 0.083, $b_{CT1–CO2}$ = -0.042 for low-tenure, and $b_{CM1–CO2}$ = 0.028, $b_{CS1–CO2}$ = -0.051, $b_{CT1–CO2}$ = -0.031 for medium- and high-tenure; all *n.s*).

Table 3. Model fit statistics for the multiple-group tests with three tenure groups (low, medium, high tenure) across two waves

Model	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	*p*	RMSEA	RMSEA 90% CI	CFI	ΔCFI	TLI	ΔTLI	Pass?[1]
Null model	3943.080	820	< .001	–	–	–	.191	.185 - .197	.777	–	.775	–	–
Measurement model estimates													
Configural invariance	1318.221	700	< .001	–	–	–	.092	.084 - .100	.956	–	.948	–	Yes
Weak invariance	1320.662	708	< .001	–	–	–	.091	.084 - .099	.956	.000	.949	.001	Yes
Strong invariance	1328.257	716	< .001	–	–	–	.091	.083 - .098	.956	.000	.950	.001	Yes
Latent model estimates													
Variance-covariance stabilities	1428.674	766	< .001	100.417	50	.000	.091	.084 - .099	.953	-.003	.949	-.001	No
Across time	1379.800	756	< .001	51.543	40	.104	.089	.082 - .096	.956	.000	.951	.001	Yes
Across groups	1419.306	756	< .001	91.049	40	.000	.092	.084 - .099	.953	-.003	.948	-.002	No
Low-tenure group differs in correlations with global commitment	1375.211	743	< .001	46.954	27	.010	.090	.083 - .098	.955	-.001	.950	.000	Yes
Latent means stabilities	1353.051	736	< .001	24.794	20	.114	.090	.082 - .097	.956	.000	.950	.000	Yes
Longitudinal structural models													
Initial SEM	1328.257	716	< .001	–	–	–	.091	.083 - .098	.956	–	.950	–	Yes
Top-down and bottom-up effects equal across groups	1381.684	746	< .001	53.427	30	.005	.091	.083 - .098	.955	-.001	.950	.000	No
Top-down and bottom-up effects different in low-tenure group	1364.547	740	< .001	36.290	24	.051	.090	.083 - .098	.955	-.001	.950	.000	Yes

Note. The sample was split into three groups: participants with low tenure (1 – 5 years), medium tenure (6 – 15 years), and high tenure (> 15 years).
N_{low} = 105, N_{medium} = 103, N_{high} = 104.
Models are based on the effects coded method of identification and phantom constructs were used to convert covariance information into estimates of the correlations among constructs and their respective latent standard deviations.
Longitudinal structural models are based on the strong factorial invariance model.
[1] The criterion for determining too much loss in fit for the measurement models was ΔCFI greater than .001, or an RMSEA that falls outside the RMSEA 90% confidence interval (CI) of the strong invariance model, following Little (2013). For all other models, the criterion for determining too much loss in fit was a significant change in χ^2 at $\alpha = .01$.



(T1)	CO	CM	CS
CM	**.846**		
CS	**.838**	.844	
CW	**.834**	.697	.719

(T2)	CO	CM	CS
CM	**.879**		
CS	**.894**	.900	
CW	**.794**	.703	.731

(T1)	CO	CM	CS
CM	.816		
CS	.647	.767	
CW	.600	.477	.512

(T2)	CO	CM	CS
CM	.825		
CS	.700	.792	
CW	.642	.514	.622

(T1)	CO	CM	CS
CM	.830		
CS	.655	.646	
CW	.662	.491	.646

(T2)	CO	CM	CS
CM	.788		
CS	.613	.700	
CW	.591	.549	.550

Figure 2. Cross-lagged effects between commitments in the three subsamples with low, medium, and high tenure

Note. T1 = First measurement occasion, T2 = Second measurement after 6 months. CO = Commitment to organization, CM = Commitment to Management, CS = Commitment to Supervisor, CW = Commitment to Workgroup.
Model estimation was based on the effects coded method of identification with the loadings invariant across time (strong factorial invariant model).
Tables display within-time correlations between commitments. Correlations that significantly differed across times are presented in bold typeface.

Discussion

Employees' commitment within organizations consists of a global commitment to the overall organization, and multiple nested specific commitments to organizational constituents (Klein et al., 2012). Despite the common conviction that the global and specific commitments influence each other, the direction of these influences is largely unclear (Vandenberghe et al., 2014). A recent first cross-lagged test of influences between global commitment and the specific commitment to supervisor suggested that changes in global commitment precede changes in supervisor commitment within low-tenured employees (Vandenberghe et al., 2014). The present study built on this finding and the suggested role theory explanation as a starting point for understanding commitment interrelations. Results from this study's cross-lagged investigations into three open questions form the basis for proposing a theoretical model of influences between global and specific commitments across the employee's organizational life, and for deriving implications for efficiently managing employee commitment.

The first hypothesis in the present study tested whether all influences between global and specific commitments followed the same direction, with global commitment influencing subsequent specific commitments. The role theory explanation argues that organizational constituents' roles are prescribed by the organization so as to contribute to fulfilling organizational goals. As a result, employees need to accept the organization and its goals before they can accept any role within the organization as legitimate and develop specific commitment to it (Vandenberghe et al., 2014). Consequently, the role theory explanation proposes that global commitment should be a consistent predictor of all specific commitments to major roles within organizations.

This study's first hypothesis tested this proposition by examining whether global commitment influenced the specific commitments to top management, supervisor, and workgroup in a tenure-diverse sample across a time span of six months. Results from cross-lagged SEM analyses supported this hypothesis: Employees' commitment to the organization influenced their subsequent commitments to top management, to supervisor, and to workgroup. Consequently, the present study lends extended support to Vandenberghe et al. (2014), showing that global commitment not only precedes commitment to supervisor but in fact precedes commitment to all three most prominent roles within organizations. In contrast, these specific commitments did not predict global commitment in return. This finding is also in line with Vandenberghe et al.'s (2014) result for supervisor commitment, but stands opposed to competing assumptions in former research. Specifically, some researchers had proposed bottom-up effects from specific to global commitment (e.g., Hunt & Morgan, 1994; Yoon et al., 1994) because specific targets act as representatives of the global organization toward employees (Eisenberger et al., 2010; Levinson, 1965). The additional empirical evidence from the current study could serve to strengthen the confidence in favoring the top-down model over models of bottom-up effects.

The second question concerned the strength of these top-down effects. Hypothesis 2 drew on the principle of line of authority in role theory (Rizzo et al., 1970) to

predict that global commitment should have the strongest influences on commitment to top management, and weakest influences on commitment to workgroup. Contrary to expectations, analyses indicated that top-down effects did not significantly differ in strength. That is, global commitment to the organization had equal effects on all three subsequent specific commitments. This finding suggests that commitment to the organization affects subsequent commitment to intra-organizational targets regardless of whether the respective target is high or low in the line of authority. What is more, it could imply that global commitment to the organization affects commitment to any role within the organization to the same extent. In other words, the organization might emit a "commitment halo" (cf., halo effect, Thorndike, 1920) that elicits a certain level of commitment to any target within the organization, simply because the target is part of the overall organization. It would be interesting to see future research follow up on this finding and investigate whether commitment to yet other roles within organizations is also affected by global commitment to the same extent. If this was the case, it could indicate that employees indeed commit to intra-organizational targets mainly as a result of their appreciation for the overall organization.

Finally, the study responded to the lack of knowledge about commitment development in more tenured employees, who most often represent the majority of the workforce (Gao-Urhahn et al., 2016). Because the organizational constituents become increasingly salient as representatives of the organization for employees who have settled into the organization (Eisenberger et al., 2010; Levinson, 1965, Vandenberghe et al., 2014), Hypothesis 3 proposed that bottom-up effects from specific commitment onto global commitment should increasingly complement the top-down effects in more tenured employees.

Multi-group SEM with three tenure groups (low tenure of 1-5 years, medium tenure of 6-15 years, and high tenure of more than 15 years) showed that influences between global and specific commitments were indeed different among medium- and high-tenured employees compared to low-tenured employees. Yet instead of supporting increased bottom-up effects in more tenured employees, results indicated no bottom-up effects in any of the three groups, thus rejecting Hypothesis 3. Interestingly, however, more tenured employees instead differed from low-tenured employees with respect to top-down effects: Whereas global commitment influenced all three specific commitments in low-tenured employees, only the top-down effect from global commitment onto commitment to top management was found in medium- and high-tenured employees. In contrast, the specific commitments to supervisor and workgroup were no longer influenced by global commitment in the more tenured groups.

This finding suggests that global and specific commitments could be overall more strongly associated in employees' earlier organizational lives than in later stages. And indeed, tests of latent correlation stabilities showed that within-time correlations between global commitment and each of the specific commitments were higher in the low-tenure group than in the medium- and high-tenure groups. These findings imply that global and specific commitments might develop sequentially, with global commitment preceding the specific commitments which only eventually develop into separate bonds: Global

commitment likely already forms during employees' information gathering process while they are searching for the new job, and hence develops before employees even enter the organization and get to know its constituents (Saks & Ashforth, 1997; Vandenberghe et al., 2014). Then when employees settle in to the organization, their commitment becomes increasingly differentiated and develops into a multi-target construct. And as the multiple commitments become more established, the influences between them appear to fade. As a result, only commitment to management remains subject to the "organizational commitment halo"—while global commitment and the two most proximate specific commitments, commitment to supervisor and to workgroup, seem to progress independent of each other and develop into truly distinct multiple commitments in more tenured employees. Therefore, the organization appears as the central focal point for commitment at the beginning of the employee's organizational life; whereas commitment of tenured employees is more complex and multi-layered, so that the constituents can function as multiple unique anchors binding tenured employees to their organizations.

Summing up, findings suggest that global commitment sets a background against which employees develop the more specific commitments to organizational constituents. From an overall perspective, the effect of global commitment onto these subsequent commitments seems to be universal, that is, it affects all specific commitments to the same extents. But comparisons across tenure subgroups reveal that eventually, top-down processes decrease, yet bottom-up effects do not emerge either. As a result, commitment to workgroup and supervisor finally progress completely independently from global commitment among more tenured employees.

Theoretical implications

While results are surprising at first, a closer look into role theory and related theories offers compelling explanations. Specifically, cognitive processes suggested in role theory and the associated social identity approach, with its two branches social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), can serve to explain the two primary novel insights from this study: 1) the universal top-down effects from global to specific commitments, and 2) the independence of supervisor and workgroup commitment among more tenured employees. In combination, these findings and their proposed explanations imply a theoretical model of the influences between global and specific commitment during an employees' organizational life cycle, based on cognitive processes.

Specifically, findings suggest that the influences between commitments in earlier organizational career are best described as a general positive influence of global on specific commitments. These universal top-down effects may be the result of a cognitive preconception within low-tenured employees which influences their choice to dedicate themselves to organizational constituents and take on responsibility for them—that is, to forming the specific commitments (Klein et al., 2012).

The basis for this preconception may be that low-tenured employees make an especially close cognitive connection between the organization and its constituents. Both

role theory and self-categorization theory give reasons for making this claim. Specifically, from a role theory perspective, the socialization process for new employees requires employees to learn about the different roles in organizations and how they contribute to organizational goals (Ashforth, Sluss, & Saks, 2007). Therefore, the functional connection between the different roles and the organization may be especially salient within low-tenured employees. From a self-categorization theory perspective, low-tenured employees are likely to use categorization and stereotypes as a pragmatic way to make sense of their organizational surrounding and compensate for low acquaintance with it (Fiske, 1993). Because categories only gradually become more refined with increasing experience (Alba & Hutchinson, 1987), low-tenured employees are likely to use broad categories and generalize from the organization to its constituents. Both processes could jointly lead to an especially close cognitive connection between the organization and its constituents, with the result that low-tenured employees' evaluations of specific commitment targets are strongly influenced by their appreciation for or disapproval of the global organization. Specifically, much as the halo effect originally described by Thorndike (1920), positive—or negative—feelings toward the organization could cause employees to equally view its constituents in a positive—or negative—light. Accordingly, global commitment potentially influences specific commitment due to an organizational commitment halo effect, which is based on a close cognitive connection between the organization and its constituents in low-tenured employees.

Taking these arguments a step further, it also appears logical that commitment to supervisor and commitment to workgroup grow independent of global commitment among more tenured employees. More precisely, their independence may be the result of tenured employees' increased interaction experiences with supervisors and workgroups. In fact, all theories of the social identity approach (Tajfel & Turner, 1979) describe processes by which interaction experiences could lead employees to cognitively separate these targets from the organization. Specifically, role theory states that roles are shaped in interactions, and by observations of how role occupants enact their roles (Biddle, 1986). As employees frequently interact with supervisors and workgroups, these targets' roles may be increasingly shaped by the target's observed behavior, which potentially diverges from the role prescribed by the organization. As a result, the initially close connection between the organization and the roles of supervisors and workgroups may become weaker and less salient.

Similarly, self-categorization theory states that interactions provide individuating information about members of a category (Hamilton & Sherman, 1996). Therefore, greater familiarity with a group causes individuals to differentiate more between group members and to form subcategories (Fiske, 1993). Accordingly, their increased familiarity with supervisors and workgroups could lead more tenured employees to differentiate these targets from the global organization.

Finally, social identity theory (Tajfel & Turner, 1979) suggests that employees might also actively reduce the cognitive connection between global and specific commitment targets. Parallel to multiple commitments, employees develop multiple nested subunit-identities to organizational constituents (Reichers, 1987). These different

identities pose different demands, which can lead to conflicts between the nested identities (Ashforth & Mael, 1989). According to social identity theory, a likely means to resolve such conflicts is for the employee to "cognitively decouple the identities so that conflicts simply are not perceived" (Ashforth & Mael, 1989, p. 30). Parallel to this process, employees could cognitively decouple the specific commitments to supervisors and workgroups from their global commitment in response to receiving demands from supervisors and workgroups that conflict with organizational demands. This suggested process is particularly interesting because it could also explain why research has not found support for conflicts between commitments, although such conflicts have repeatedly been proposed (Reichers, 1985; Hunt & Morgan, 1994): The independency between proximate specific commitments and global commitment among more tenured employees could simply remove the potential for commitment conflicts before they occur.

Taken together, interaction experiences with supervisors and workgroups could activate processes that cognitively separate the overall organization from supervisors and workgroups. This cognitive separation could dissolve the initial commitment halo, and be the reason why supervisor and workgroup commitment eventually grow independent from global commitment.

Practical implications

This study's findings have important implications for promoting and managing employee commitment in organizations. Maybe most importantly, they provide differential advice with regard to employees in different phases of their organizational career.

Overall, results suggest that it could be most relevant to ensure high global commitment in the beginning of employees' organizational career. Global commitment to the organization appears to function as a lever to increasing employee commitments in general. Therefore, measures that contribute to installing global commitment to the organization before entry and during socialization could pay off multiple times by laying the foundation for other more specific commitments. Measures before entry could include building a positive employer brand, and demonstrating high selectivity during the selection process. By these means, organizations could elicit pride within newcomers for having been selected as new employees, and taking pride in being a member of an organization is regarded as an element of commitment (cf., Allen & Meyer, 1990). In addition, organizations could design onboarding and socialization so as to create a feeling of mutual appreciation. For example, onboarding events could not only include a presentation of the strengths and values of the employing organization, but also demonstrate interest in the new employee's former experiences, qualifications and skills, and their ideas and thoughts about their new employer. Such measures could also help the organization to identify ways in which it can support the new employee to settle into the organization. Besides potentially reducing the time for initial training, this could help to install trust and perceived organizational support, both of which are essential for commitment to the organization (e.g., Vandenberghe et al., 2004; Allen & Meyer, 1990).

On the other hand, the central role of global commitment also represents a challenge for retention management in the beginning of employees' organizational lives. As the specific commitments of low-tenured employees are volatile to changes in their global organizational commitment, it is essential that their global commitment is maintained. Therefore, practitioners seeking to bind new employees to the organization should aim to prevent severe drops in organizational commitment caused by, for example, disillusionment resulting from unmet expectations (Vandenberghe et al., 2014) or lack of perceived organizational support during socialization (Rhoades & Eisenberger, 2002).

In contrast to low-tenured employees, the more tenured employees appear to be anchored in the organization by multiple, more independent commitments. Specifically, whereas global commitment apparently remains a lever for commitment to top management, it seems to no longer influence commitments to supervisors and workgroups as tenure increases. On the one hand, this means that specific commitments can no longer be efficiently increased by measures that target global commitment. But on the other hand, the independence can also be an advantage because it reduces the potential for commitment conflicts or negative spillovers (cf., Reichers, 1985), hence allowing for a more varied commitment and retention management that no longer depends primarily on increasing and maintaining global commitment. More precisely, for example, neither would a negative event that corrupts organizational commitment reduce all of the tenured employees' commitments, nor would an increase or decrease in commitment to the workgroup in turn lessen commitment to the organization. These results advise practitioners to use a more specific approach to strengthen commitment within tenured employees. Specifically, a reasonable approach might be for practitioners to first identify which commitment they seek to strengthen. For example, they could focus on a commitment that appears to be unusually low, or identify which outcomes are aspired and which commitment is most strongly associated with these outcomes. Then, they can take measures specifically tailored to fostering this particular commitment (for some examples of studies which compare the different commitments' effects on beneficial outcomes and how to foster them, see Bishop, Scott, & Burroughs, 2000; Riketta, 2002; Van Steenbergen & Ellemers, 2009; Vandenberghe et al., 2004).

Taken together, results advise practitioners to focus on promoting and protecting high global commitment among low-tenured employees, but to employ more specific interventions in order to strengthen the specific commitments among more tenured employees.

Limitations and future research

The present study has some limitations that hopefully contribute to inspiring future research following up on the present findings. First, there are some restrictions related to the sample and procedure. On the one hand, the study moved beyond former research by studying a sample with a representative distribution of gender and places of residence, an even age distribution, diverse tenure, and spanning a wide variety of

educational backgrounds and occupations. On the other hand, there might be restrictions to generalizability across cultures because all participants were German residents. Yet descriptives and correlations resemble those reported in previous samples (e.g., Becker & Billings, 1993; Vandenberghe et al., 2014), and the replicated top-down effect onto commitment to the supervisor among low-tenured employees (cf., Vandenberghe et al., 2014) further suggests that results may be comparable across Western cultures.

Furthermore, the online administration entails a greater risk for insufficient effort responding (IER; Johnson, 2005). IER research recommends balancing the advantage of more accurate insights from screening out cases with indications of IER against the loss in power from reducing sample size (Johnson, 2005; Huang et al., 2012). The present study opted for a restrictive screening procedure because SEM is a powerful method and sample size after screening was still adequate for detecting influences between commitments in the entire sample as well as in the three subsamples ($N_{\text{full sample}}$ = 312 and $N_{\text{subsamples}}$ between 103 and 105, compared to a recommended minimum sample size of 100 for single group and 75 for multi-group analyses, Little, 2013).

Other limitations concern the study's analyses. Particularly, SEM assumes multivariate normality in the data. However, commitment data in the present study were somewhat skewed, which is typical in commitment research (Swailes, 2002). To counteract potential distortions of results, the study employed maximum likelihood estimation, which is relatively robust and tolerates moderate violations of the multivariate normality assumption. Furthermore, SEM and the panel design together provide a rather conservative test when auto-correlations are high (Vandenberghe et al., 2004). Accordingly, the present study might have underestimated effects. This is particularly relevant with respect to the lack of support for bottom-up effects. Although previous cross-sectional results did not support bottom-up effects either (Vandenberghe et al., 2014), this limitation implies that more research is needed before rejecting the bottom-up effects hypothesis raised in previous research (e.g., Hunt & Morgan, 1994; Yoon et al., 1994).

In addition, there are also some study design issues that future research might address. First of all, the study used a multi-cohort-design by splitting the sample into three equally sized groups based on tenure, with cutoffs providing that results for the low-tenure group could be compared with the previous results by Vandenberghe et al. (2014). The differences between these groups provide information on how the influences between commitments within more tenured employees differ from those in low-tenured employees. However, the present study also suggested that the differences between the groups might be indicative of longitudinal changes in commitment interrelations across the employees' organizational careers. This suggestion calls for longitudinal studies which accompany employees throughout longer periods of their organizational careers, and actually measure how cognitive processes change with increasing tenure. Such research could also find out whether longer time lags between measurement occasions could reveal additional insights. For example, the bottom-up effects could stretch across

longer time periods, which would be an alternative explanation for why they were insignificant in the present study (Vandenberghe et al., 2014).

Results also suggest that it might be especially interesting for future research to investigate commitment interrelations within new entrants. For example, the present results imply that the strongest between-commitment effects could occur while or shortly after the employment relationship begins. Because the present study was interested in influences between established commitments, it was based on a sample of employees that had spent at least one year working for their current employer (cf., Gao-Urhahn et al., 2016). Future research could instead aim to shed more light onto earlier processes during the initial development of commitments by repeatedly measuring commitment within the same employees during selection, entry, and early socialization phases, using very short time intervals. Above all, the suggested theoretical explanations are hoped to inspire future research. Specifically, research could test the proposed cognitive processes, investigate whether the more tenured employees' categories are indeed refined, and whether their role definitions for supervisors and workgroups change over time. Additionally, the study suggested that personal interactions may be the root cause of these processes, which explains why commitments to supervisor and workgroups, but not to management grow independent with higher tenure. Future research could investigate into this proposition by using interaction frequency with a target as a moderator for the growing independence of commitment to this target from global commitment.

Finally, in the context of promoting our understanding of developmental processes, another interesting direction for future research could be to look into processes after a change in commitment target. It would promote the current understanding if research found out whether global commitment again elicit its "halo" onto commitment to a new supervisor, to a new top management, or to a new workgroup. Accordingly, future studies could collect data from samples that recently experienced a change in commitment target and investigate whether commitment to this target is again affected by global commitment also within more tenured employees.

Conclusion

Taken together, the present research provides novel insights into the influences between employees' global commitment to the organization and their specific commitments to its constituents. Findings further support the proposed model of top-down effects from global to specific commitments derived from role theory (Vandenberghe et al., 2014), and do not support the competing model of bottom-up effects (e.g., Hunt & Morgan, 1994; Yoon et al., 1994). Moreover, tenure appears as an important factor for these influences: While low-tenured employees seem to experience an "organizational commitment halo", with global commitment influencing all specific commitments to the same extents, the specific commitments of more tenured employees are mostly independent of global commitment. From these results, cognitive processes such as increasing cognitive separation between targets due to growing interaction

experiences appear as a promising explanation for how a predominant global commitment develops into a multi-target construct of increasingly unique bonds. From a practical perspective, commitment to the organization emerges as a lever to establishing and maintaining employee commitment in the first years; whereas commitment interventions for more tenured employees should be tailored to the specific commitment that practitioners intend to strengthen. We hope the present study will contribute to understanding employees' multiple commitments and inspire further research into their developments over time.

3. General discussion

The present research aimed to lighten the dark of employee commitment by conducting refined investigations into debated commitment associations. More specifically, three studies investigated debated commitment associations from three different perspectives, covering values and value congruence as proposed antecedents, change readiness as a proposed consequence, and the influences between global and specific employee commitments. Four refinements were applied to advance these debates: The multi-target perspective on commitment, which differentiates between employees' commitment to the organization and their commitments to its constituents; the confound-free commitment conceptualization, which allows more precise assessments; links to established theories, which explain the underlying principles of these associations; and methodological advancements, which allow clearer empirical insights. Together, results of the three studies provide novel insights about commitment and its antecedents and consequences. They have important implications presented in the following joint discussion. Specifically, from a theoretical perspective, the present research contributes to a deeper understanding of employee commitment overall and can inform future theory building about its development, composition, and effects. From a practical perspective, the present research provides specific advice and further informs about how to manage, strengthen, and seize commitment as a vital resource for employee well-being and organizational success.

3.1. Summary of results

The first study investigated the role of values and value congruence for commitment. Traditionally, researchers regarded value congruence between the employee and their commitment target as a fundamental basis for commitment (e.g., Mowday et al., 1979; O'Reilly & Chatman, 1986). This conviction now stands debated, as studies with new research methods indicated that *high* values related to high commitment, and value congruence appeared less important in comparison (e.g., Kalliath et al., 1999; cf., Kristof-Brown et al., 2005). Yet results between studies and even results within studies were contradictive (e.g., Abbott et al., 2005; Finegan, 2000). As a result, commitment research hesitates to shift the focus from value congruence onto value levels as the more relevant commitment antecedent before these effects are better understood (cf., Kristof-Brown et al., 2005).

Therefore, the first study in the present research presented a refined investigation into values' and value congruence's effects on commitment. In particular, it is the first study to compare the relative contributions of employee values, perceived target values, and of congruence between these values on commitment not only across value dimensions, but also across the organization, supervisor, and workgroup as sources of values and targets of commitment. Polynomial regressions and response surface analyses on data from 1,000 employees across Germany provided three central insights: First, perceived target values play a key role for commitment. Higher perceived target value levels increased commitment consistently for all values and all targets. Second,

value congruence relates to higher commitment than incongruence only for values associated with performance expectations by organizations and supervisors. For all other values and for all workgroup values, results indicated that commitment increased whenever values increased, regardless of whether this led to value congruence or incongruence. Third, the most relevant values for commitment are people-centered values (i.e., Team Orientation and Respect for People). High levels on these values related to higher commitment, both when they were endorsed by any of the three targets as well as when they were endorsed by employees.

These findings significantly advance the debate over value congruence's role for commitment. Specifically, combined with previous research, results make a strong call to regard the fundamental importance of value congruence for employee commitment as overestimated and shift the focus from value congruence to value levels (Finegan, 2000; Kalliath et al., 1999; Ostroff et al., 2005). This is because employees do not commit most to targets with congruent values, but instead employees commit strongest to targets who seem to hold high values, especially to those who highly value people and teams. Accordingly, it appears to be more important for commitment that targets appear principled, thus more predictable, and overall considerate rather than similar to employees. In contrast, value congruence seems to contribute to commitment only when it prevents conflicts with supervisors and the organization over performance expectations.

Regarding future commitment research, Study 1 hence shows that such differentiated analyses help to more fully understand values' role for commitment. Moreover, the pattern of differences across values and targets hopefully inspires future research on the underlying principles which link values to commitment. From an applied perspective, results advise practitioners to lay the foundations for commitment by promoting people-centered values throughout all members of organizations, and focus on high values and value expression rather than seeking congruence.

The second study examined commitment's effects on employee change readiness. Commitment's role for change readiness is debated because several theoretical arguments suggest that committed employees more readily support change (Armenakis et al., 1993; Eby et al., 2000), but at the same time, there are also reasons to suggest that committed employees may oppose change (cf., Madsen et al., 2005). Empirical tests of commitment effects on change readiness are scarce (Oreg et al., 2011), and have focused exclusively on global commitment to the organization (e.g., Madsen et al., 2005; Kwahk & Kim, 2008). However, the change literature suggests that not the organization as a whole but managers, supervisors, and workgroups are especially relevant for employee reactions to change (Eby et al., 2000).

Consequently, the second study complements previous research and investigated whether commitment to top management, commitment to supervisor, and commitment to workgroup positively relates to employee change readiness. Moreover, the study proposed that the target's perceived change advocacy moderates the association between commitment and change readiness and can explain when commitment contributes to change and when it does not. Moderated regression and slope analyses

on data from a sample of 220 blue-collar workers from a mechanical engineering plant provided full support. Specifically, results indicate that commitment to top management, the supervisor, and the workgroup each positively relate to change readiness overall. Yet, as expected, this association appears to be stronger when commitment targets are perceived to advocate changes. And conversely, commitment shows no significant or even a negative association with change readiness when it is directed at a target that does not advocate change. When comparing results for the different targets, commitment to top management has the most consistently positive effects on change readiness, with lower influence of top management's change advocacy. That is, employees who are committed to top management are almost always more ready to change, except for when they perceive that top management hardly advocates change at all. Results were similar for commitment to supervisor. In contrast, commitment to workgroup can have either positive or even negative effects depending on the change advocacy of the workgroup.

Therefore, the study integrates both positions in the debate over whether commitment contributes to or hinders change readiness. Specifically, its results imply that employees seek to align their change readiness to the change advocacy of those to whom they feel committed. When targets are averagely supportive of change or advocate change strongly, more committed employees are also more ready for change. But in the case of high commitment to a workgroup that opposes change, commitment may indeed hinder successful change implementation. However, employees who are committed to their top managers or supervisors will not go so far as to become less change ready when top managers or supervisors do not advocate change just to align with them. Instead, committed employees apparently respond neutrally to low change advocacy by supervisors and top managers by not becoming any more or less change ready. This probably reflects the committed employee's wish to protect their top managers or supervisors from trouble that could result when their subordinates do not conform to the organizational request for change.

These results advise researchers and practitioners to consider commitment and the change advocacy of a commitment target together with regard to employee change readiness. From a research perspective, the study also indicates that commitment research needs to consider the attitudes and goals of commitment targets in order to explain commitment effects. From an applied perspective, results suggest that commitment can help to strengthen change readiness, but practitioners need to gain the change support of important commitment targets within the organization.

The third study examined the influences between global commitment to the organization and the specific commitments to top management, supervisors, and workgroups. The debate over these influences is characterized by two opposing models: Top-down models suggest that global commitment to the organization influences the specific commitments to organizational constituents, whereas bottom-up models suggest that the specific commitments instead influence global commitment to their encompassing organization (Vandenberghe et al., 2014). A recent first cross-lagged study by Vandenberghe et al. (2014) supported a top-down model based on role theory,

but tested it only for the specific commitment to supervisor and within low-tenured employees.

Extending this research, the third study developed hypotheses and tested the influences not only for commitment to supervisor, but also for commitments to top management and workgroups. In particular, it investigated whether influences between global commitment and commitments to all these three targets follow the same direction, whether they differ in strength, and whether they differ between employees with low, medium, and high tenure. Data were collected by contacting the employees who had participated in the first study of the present research again after six months. Data from the resulting sample of 312 participants with complete data for both measurement occasions were analyzed using cross-lagged structural equation modelling. In the full tenure-diverse sample, global commitment was found to influence all three specific commitments to top management, supervisor, and workgroup. There were no feedback or bottom-up effects of specific commitments onto global commitment. Different from expectations, the top-down influences were equally strong for all targets. Following these tests, the sample was split into three cohorts of employees with low (1–5 years), medium (6–15 years), and high tenure (> 15 years), respectively. Multi-group cross-lagged SEM revealed differences between these cohorts: Only in the low-tenure group did global commitment precede all specific commitments. In the more tenured groups (with one exception for top management commitment in the high-tenure group), there were no cross-lagged effects at all.

These results have important implications for multi-target commitment theory. On the one hand, they fully support the top-down effects model, and completely reject bottom-up effects. Beyond that, they explain why the nested commitments are related and yet distinct from each other. Specifically, the distinct commitments apparently result from a differentiation process which operates at earlier stages of an employee's organizational career. As Study 3 implies, global commitment to the organization develops first and provides the background for the specific commitments to organizational constituents. As a result, global commitment to the organization equably reflects onto the specific commitments to top management, supervisors, and workgroups in the sense of a "commitment halo" (cf., halo effect; Thorndike, 1920). However, this halo ceases as employees accumulate distinct experience with each of the constituents. Potentially, more tenured employees come to recognize more and more differences or contrasts between the organizational constituents and the organization as a whole, so that they increasingly differentiate between them (cf., Fiske, 1993). And as a consequence, the specific commitments no longer depend on global commitment in more tenured employees, but develop into truly unique and distinct bonds which interrelate not because they influence each other but because they originated from a common base.

Therefore, Study 3 provides commitment research with solid support for the top-down model of influences between commitments. Moreover, it further qualifies this model by showing that the influences operate at earlier stages of the employee's organizational career and cease with increasing tenure, so that commitment of more tenured employees is indeed a conglomerate of distinct commitments to the organization and its constituents (Reichers, 1985). From a practical perspective, results advise practitioners to focus on

establishing and maintaining global commitment to the organization during the socialization of new employees. This is because increases or losses in global commitment reflect onto specific commitments during the first years of tenure. In contrast, more tenured employees have separate ties to the organization and its constituents, challenging but also providing practitioners with multiple levers for managing engagement and retention.

Finally, the three studies together offer additional results on multi-target commitment. Specifically, recurring findings across the studies and previous research (e.g., Becker & Billings, 1993; Riketta & van Dick, 2005; Vandenberghe et al., 2004) imply that the distinction of commitments to the organization, top management, supervisors, and workgroups is largely generalizable across organizations and settings, and so are their relative strengths. More precisely, the multi-target conceptualization appeared both meaningful across diverse samples and stable over time; and employees were usually most committed to the workgroup, followed consecutively by commitment to the organization, the supervisor, and top management. In combination, this overarching finding implies that employees in different jobs, organizations, and cultures will usually form these unique bonds to the constituents of organizations.

3.2. General implications

3.2.1. Theoretical implications

The three studies have several important implications for commitment research. First, they highlight that alongside the commitment bond itself, the targets of commitments are extremely relevant. In particular, commitment targets influence all three kinds of commitment associations: how commitment forms (Study 1), develops (Study 3), and how it affects employee reactions (Study 2).

Specifically, there are two ways by which the targets make a difference for commitment associations. On the one hand, associations differ depending on the target's position in the organization. For example, commitment to supervisors increases when certain employee values and supervisor values are congruent, whereas commitment to the workgroup is not affected by value congruence with the workgroup at all (Study 1). And commitment to top management usually contributes to change readiness, whereas commitment to workgroup can in fact decrease it (Study 2). Study 3 further underlines that commitments to different targets represent separate bonds, showing that they grow increasingly independent with higher employee tenure. These findings add on to previous research on other commitment associations, which also consistently reported different associations for commitments to different targets (cf., Riketta & van Dick, 2005). Therefore, the present research underlines that the organization and its constituents top management, supervisors, and workgroup are distinct actors in the organization and need to be considered as such in commitment research.

On the other hand, the targets not only occupy different positions in the organization. But much beyond that, the targets are also individuals who likely hold different opinions, attitudes, values, and goals—which can significantly impact commitment and its consequences. The present research introduces this thought into commitment research and provides empirical support for this view. For example, the values that a target holds apparently influence how much employees commit to them (Study 1). And the perceived goals of a target seem to guide employees in how to express their commitment and respond to change (Study 2). Consequently, the present research implies that individual differences between targets matter for building commitment as well as for its consequences. Clearly, this also empirically supports Klein et al.'s (2012) claim to consider constructs that were confounded with commitment as separate constructs (especially goals and values) and study them in addition to commitment rather than included within. As shown in this research, such differentiations can help to explain mixed results in former research, and contribute to further progress in commitment theory.

In conclusion, the present study's first implication is that the commitment targets play a significant role for commitment and its effects; therefore it strongly advises commitment research to consider targets as individuals with individual values and goals.

The second implication closely relates to recognizing the targets as individual social beings or groups: It is the insight that principles from basic theories on social cognitions and behavior underlie commitment associations.

With respect to values as central antecedents of commitment, the principles of uncertainty reduction and consistency appear especially relevant. Specifically, uncertainty reduction theory (Berger, 1979) can explain why high perceived value levels of commitment targets increase employee commitment (Study 1): When employees report that a target has high values, it reflects that this target appears to have strong internal beliefs and convictions which guide the target's behavior (Schwartz, 1994). From the employees' point of view, a target with high perceived values therefore likely appears more predictable than a target with lower value levels. Uncertainty reduction theory (Berger, 1979) states that individuals generally seek to reduce uncertainty. Accordingly, employees may seek closer bonds with those targets who reduce uncertainty by being more predictable. Taken together, this reasoning implies the following processes behind the effects of target value levels on commitment: The stronger a target endorses a value, the more this value will guide the targets' behavior and make it predictable to the employee; and the more predictable targets are, the stronger employees will commit to them.

Beyond that, Study 1 implies that employees commit not only in response to when their targets provide certainty because they act consistent with values, but also because employees themselves seek to act consistent with values. In particular, employees seem to seek consistence with the target's emphasis on people-centered values and with their own emphasis on people-centered values, as they commit stronger the higher these values are endorsed by the target or themselves. This implies that an employee's wish to comply with social norms and consistency motives are important for commitment and

further explain why values and particularly people-centered values are antecedents of commitment (cf., Rokeach, 1973; Maierhofer et al., 2002; Cialdini et al., 1990).

Moving on to consequences of commitment, principles from balance theory (Heider, 1958) seem important for whether commitment contributes to certain employee outcomes. Specifically, balance theory can explain why the change advocacy of a commitment target influences whether the more committed employees will also be more ready for change (Study 2). Again, the employee's consistency motive forms the basis for this phenomenon. According to balance theory, it causes employees to try to balance the relations between themselves, their commitment targets, and change (cf., Heider, 1958). Commitment represents a positive relation between the employee and the commitment target. Therefore, committed employees can only balance the remaining two relations (between change on the one hand and themselves or the target on the other) by adapting their change readiness to the change advocacy of the target, so that either the employee and the target both agree to support change or both agree to not support change any more than necessary. However, it is important to note that committed employees seem to follow the lead of their supervisors and top management only if it means that they should be *more* ready for change than an average employee. As noted above, this could reflect that committed employees have chosen to take on responsibility for their target (Klein et al., 2012) and decide not to follow their targets in being less change supportive than average in order to protect them from any associated conflicts. Taken together, this research implies that consistency motives play a role for commitment antecedents (Study 1, see above) and also for commitment consequences, as they lead committed employees to adapt their change readiness to the goals of their commitment targets, limited only by their feelings of responsibility for the target (Study 2).

Finally, closing with the internal perspective, the principles of role theory (Katz & Kahn, 1978) and the associated social identity and self-categorization theories (Tajfel & Turner, 1979; Turner et al., 1987) appear most apt to explain the influences between global and specific commitments. Specifically, role theory can explain why global commitment to the organization has the observed halo effect (cf., Thorndike, 1920) and influences the specific commitments to top management, supervisor, and workgroup (Study 3). Once more, the basis of these influences seems to be that employees seek consistence with the commitment target and accept its goals. More precisely, role theory and the present research imply that commitment develops as follows: New employees first build a global commitment to the organization which already forms before they even enter the organization (Vandenberghe et al., 2014). Their initial commitment to the organization leads employees to accept the organizational goals, consistent also with the reasoning from balance theory and Study 2. Based on role theory, this acceptance of organizational goals is the foundation for employees to accept top management, supervisors, and workgroups as occupants of roles which contribute to the organizational goals, and to then form unique commitments to each of them (Bentein et al., 2002; Merton, 1957; Sluss & Ashforth, 2007; cf., Vandenberghe et al., 2014). Because of this process, the specific commitments initially depend on global commitment, so that higher or lower global commitment leads to consistently higher or lower specific commitments in low-tenured employees, respectively (Study 3). But the more employees grow familiar

with role occupants through frequent interactions, the more they differentiate between them and the organization, presumably due to cognitive processes of subcategorization that operate when individuals become more acquainted with social groups (Fiske, 1993). And as a result, the specific commitments to targets that employees frequently interact with become decoupled from global commitment in more tenured employees (Study 3). In addition, employees may also actively push the cognitive decoupling process because it prevents commitments from getting into conflict with one another (cf., Ashforth & Mael, 1989).

In combination, the three studies imply that employee commitment is a social phenomenon that follows the basic principles of social cognition and behavior, with consistency motives playing a particularly relevant role. Therefore, commitment research could profit from drawing onto theories from social psychology in order to reveal unknown processes between committed employees and their commitment targets which explain the influences between commitments and their antecedents and consequences.

Taking a broader perspective and transcending the individual implications of each study, there are some intriguing similarities in the processes that were presented to explain results. They point at a third implication of the present research: Apparently, a common theme underlies commitment and its antecedents and consequences. Specifically, the recurring theme that connects the theoretical explanations in the present research is the contribution to a consistent, reliable, and therefore secure, considerate social environment which smoothly functions with a minimal risk of conflicts. The more their targets provide employees with this kind of environment, the more employees seemingly commit and respond consistently, which makes them further contribute to this kind of environment themselves (Figure 5).

The explanations for the antecedents, consequences, and internal influences of commitment that were studied in the present research all connect to this theme. Moreover, findings from previous commitment research further support this proposition.

In particular, from the antecedent perspective, environments that exhibit the characteristics of consistence and reliability, consideration, and low conflicts seem to contribute to commitment. Regarding consistency and reliability, Study 1 shows that strong target values which provide predictability are more relevant for commitment than congruent values, and targets who uphold stability attract higher commitment. In a related vein, previous research also indicates that commitment profits from a predictable environment, with studies showing that clear roles and perceived control over the situation relate to higher commitment (Klein et al., 2012; Swailes, 2002). Regarding consideration, Study 1 shows that a strong people orientation of targets increases commitment. Similarly, support from the targets organization and co-workers increased commitment in previous research (Iverson & Buttigieg, 1999; Stinglhamber & Vandenberghe, 2003). Regarding low conflicts, Study 1 indicates that congruent values matter for commitment when they reduce the risk of conflicts over employee performance. This conforms to the literature which reports that fewer conflicts increase commitment (Maierhofer et al., 2002).

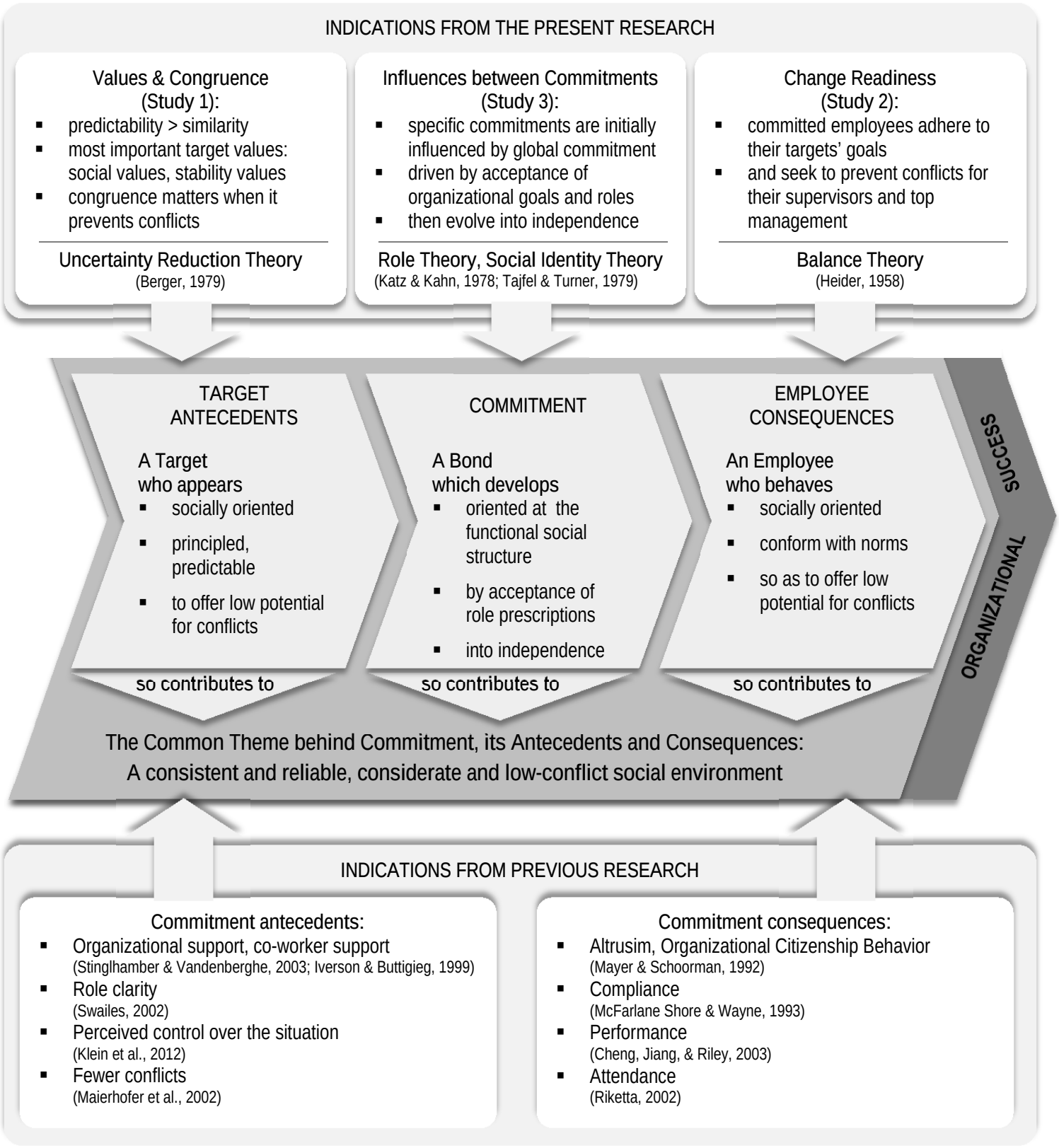


Figure 5. Suggested common theme behind commitment, its antecedents and consequences

From the internal influences perspective, consistency and low conflicts also seem to play a role within commitment and its development over time. Specifically, Study 3 supported the role theory explanation which states that commitment's development is driven by the employees' acceptance of how the organization has prescribed the roles of its constituents (cf., Vandenberghe et al., 2014). This implies that the process of how

commitment develops itself contributes to consistency within the organizational structure of roles. Moreover, the following evolution into independent commitments likely contributes to preventing cognitive conflicts and therefore relates to a low-conflict environment (cf., Ashforth & Mael, 1989).

From the consequence perspective, commitment seems to encourage behavior that contributes to the consistent and reliable, considerate, and low-conflict environment. Regarding consistency and reliability, Study 2 indicates that targets can count on committed employees to help them attain their goals and to act consistent with the norms modelled to them. Similarly, previous research shows that committed employees are more compliant (McFarlane Shore & Wayne, 1993). Regarding consideration, committed employees apparently take care of the people around them by showing more altruism and organizational citizenship behavior (Mayer & Schoorman, 1992), and spare their supervisors trouble by not opposing changes (Study 2) and by showing high performance (Cheng et al., 2003). Finally, regarding low conflicts, committed employees likely prevent conflicts because they seek to conform to their targets (Study 2) and to obligations such as attendance rules (Riketta, 2002).

The implication of this environment as a common theme behind commitment and its associations once more underlines that employees seek not only work and money from organizations. Instead, employees seem to readily welcome when organizations provide an environment that also fulfills their needs for relatedness and certainty (cf., Alderfer, 1969). Provided with this kind of environment, employees apparently seek belonging, then commit, blend in, and contribute to sustaining this environment. While the present research has identified the kind of environment that is associated with commitment and its antecedents and consequences, future research could use it as an inspiration for causal models of the influences between employees' commitments and the consistency, consideration, and extent of conflicts in their social environment as created by the organization and its constituents.

3.2.2. Practical implications

The present research holds several new insights for practitioners, with important practical implications. This section presents the insights first, and is then followed by specific suggestions for organizational practices to foster and seize employee commitment.

According to the present findings, the values and goals of commitment targets are important for strengthening commitment as well as for its contribution to desired outcomes in organizational practice. Practitioners should be aware that values on all levels of the organization influence employee commitment (Study 1). However, the organization is the focal point for commitment for new hires (Study 3). In combination, Studies 1 and 3 therefore emphasize the perceived values of the organization, and particularly its endorsement of people-centered values, as a central factor for building commitment overall. This implication finds further support in research which identified strong influences of perceived organizational support onto commitment (Stinglhamber & Vandenberghe, 2003). Accordingly, ensuring that new employees perceive a principled

and people-supportive organizational culture emerges as a central lever to encouraging initial commitment.

The values and goals within organizations that are important for commitment become more spread out with more tenured employees. Specifically, organizational values and commitment do not remain the levers to all employee commitments, but the specific commitments now become independent additional commitments, and so the perceived people-orientations of supervisors and workgroups become additionally important (Studies 1 and 3). As indicated by Study 2, it then again depends on the targets' values and goals whether high commitment ultimately translates into the expected benefits for organizations. In a broader sense, this research implies that high commitment only has the intended consequences when the commitment targets themselves also have positive attitudes toward the organization and its goals. Presumably and as can be inferred from Study 1, such positive attitudes by the commitment targets will in turn again be strongly related to the target's values. This adds even more relevance to the values of commitment targets.

In conclusion, the targets' values and goals hence appear fundamental for commitment. Therefore, this research advises practitioners who seek to encourage commitment for its beneficial consequences to pay special attention to the commitment targets and to the values and goals they convey toward employees.

These insights can serve to deduce specific practical advice for different phases of the employee lifecycle, particularly for recruitment and selection, socialization, and for engagement and performance management.

First, with respect to recruitment and selection, practitioners should look for certain values in future employees. In particular, applicants who value Team Orientation and Innovation seem to be more prone to commit to any target (Study 1). While results suggest focusing on those values that contribute to global commitment to the organization first, because global commitment is the basis for all other commitments (Study 3), there are also reasons to look for employees who value Respect for People which contributes particularly to the specific commitments to supervisors and workgroups: First of all, these specific commitments hold great benefits for organizations, because they are associated with outcomes such as in-role and team performance, courtesy, conscientiousness, and altruism (Becker & Kernan, 2003; Hunt & Morgan, 1994; Neininger, Lehmann-Willenbrock, Kauffeld, & Henschel, 2010). But beyond that, practitioners should also think ahead and consider that new hires will eventually become commitment targets themselves. Those employees who highly value Respect for People are not only more likely to commit, but also likely contribute to the considerate environment that seems to encourage commitment. And when they work in workgroups or are promoted to supervisor positions, they will inspire greater commitment from workgroup members and their subordinates (Study 1). This also implies that when recruiting supervisors, practitioners should aim to find supervisors who already display high Respect for People and Stability values. Furthermore, when selecting supervisors for a given workgroup, practitioners can lay the foundation for higher subordinate

commitment when they match supervisors' performance-related values with those of their future subordinates.

Second, with respect to the socialization phase, the present research suggests that practitioners should focus on high commitment to the organization among new employees to lay the foundations for high commitment overall (Study 3). Therefore, organizations need to present themselves to new employees in a way that fosters commitment to the organization. One of the key factors for global commitment to the organization is organizational culture and values (cf., Klein et al., 2012). The present findings imply that an organizational culture which elicits commitment is characterized by high Respect for People and Team Orientation values (Study 1). Such a culture may pay off multiple times in the long term, because more tenured employees increasingly take on the values of their organizations (Kristof et al., 1996). And as outlined above, endorsement of these values by employees also contributes to commitment. Accordingly, this culture should help to provide a fruitful base for commitment to the organization and its constituents in low-tenured employees, and also contribute to commitment to the organization in more tenured employees.

However, as changes in global commitment carry forward to the specific commitments in low-tenured employees, it is not only important to initially create high global commitment, but also to ensure that it remains high during the first years of employment (Study 3). This seems to be a challenge in practice, since previous research reports that commitment to the organization usually declines over time in newcomers (Lance, Dawson, Birkelbach, & Hoffman, 2010; Vandenberghe et al., 2014). Reportedly, these declines reflect employees' disillusionment when they feel that their expectations are not met during their early careers (Vandenberghe et al., 2014; Wanous, Poland, Premack, & Davis, 1992). The current research advises practitioners to take on the challenge to prevent or at least reduce this decline, because any decreases in global commitment during early career apparently spill over and decrease the specific commitments as well. Accordingly, practitioners should seek to achieve realistic expectations on behalf of low-tenured employees to prevent disillusionment. Moreover, they could take counteractive measures that foster global commitment during the socialization phase. For doing so, practitioners may draw on previous research which particularly recommends to increase perceived organizational support by interventions targeting fair treatment of employees, rewards, and job conditions (for a meta-analysis on the antecedents of perceived organizational support, see Rhoades & Eisenberger, 2002).

Third, with respect to the phase of engagement and performance management of employees who have passed the socialization phase, practitioners can take measures to further strengthen employee commitment and to ensure that it translates into the intended benefits for organizations.

When strengthening commitment within more tenured employees, practitioners must consider the different commitments as independent resources (Study 3). Because previous research identified different antecedents for each commitment, practitioners may consult the literature to identify interventions specifically targeted to the commitment

they are aiming to increase (e.g.,Riketta & van Dick, 2005). Yet the present research implies that there are still measures that could simultaneously benefit all commitments. Specifically, the more employees perceive high values among the organization and its constituents, the higher they are committed (Study 1). Although some values appear particularly relevant (as outlined above), stronger perceived value endorsement generally seems to contribute to commitment. Accordingly, organizations could aim to make values transparent throughout the organization and its members so that they are more strongly perceived by employees. Interventions could include emphasizing values in communications with employees and relating organizational strategies, goals, and decisions to the organization's values. Regarding executive–employee relations, literature on authentic leadership may provide helpful suggestions, because this leadership style encourages leaders to become aware of their values and to make them transparent to followers (Avolio & Gardner, 2005).

A special implication arises for values related to performance expectations and evaluations. It seems that these values hold the potential to reduce commitment if they are not equally endorsed by employees and their higher-ranked commitment targets (Study 1). To prevent conflicts rooting in these incongruence scenarios, practitioners may consider trying to align executives and employees on these values by personnel and team development measures. As an alternative approach, practitioners could provide clear official criteria for performance expectations and evaluations that are transparent to leaders and followers. Such provided criteria could take over the guiding role of values in these performance scenarios and in turn reduce the potential for conflicts caused by incongruent values.

Practitioners who consider strengthening employee commitment in their organization may find it helpful to turn to the present research for approximate commitment benchmarks. Although the samples were diverse and the cultural setting differed from previous research, the order of commitment levels was consistent across the present studies and previous research (Becker & Billings, 1993; Bentein et al., 2002; Vandenberghe et al., 2004): The average employee seems to be most committed to the workgroup, followed consecutively by commitment to organization, supervisor, and top management. Moreover, average commitment levels generally fell into the range of 4 to 5 on 7-point Likert scales. Practitioners may use these estimates as a rough reference for identifying marked deviations in their organizations that could inform them about whether and where to start commitment interventions.

Apart from strengthening commitment, practitioners can also take measures that increase the extent to which existing commitment transfers into beneficial employee outcomes. The present research implies that committed employees may readily work toward what they perceive is an important goal of their commitment target (Study 2). Consequently, two steps may help organizations to particularly seize commitment as a resource for goal attainment. First, practitioners should identify the groups and constituents within their organizations that attract high commitment by employees. The present research strongly advises practitioners to be aware of the most relevant commitment targets within their organizations because their attitude towards a goal decides whether employee commitment helps with goal attainment or could obstruct it.

Therefore, as the second step, once practitioners have identified the important targets, they need to convince them of the organizational goals and encourage them to advocate the respective goals towards employees. For example, practitioners could involve important commitment targets in goal-setting processes or trainings to gain their goal support (Locke & Latham, 2002). Beyond that, when the target's goal support has been gained, interventions could also build on the suggestion that it is consistency motives which motivate employees to adhere to the targets' goals. Such interventions could be efforts to clarify which kinds of employee reactions and behaviors are most consistent with the target's goals, and to highlight how according behavior will benefit commitment targets.

Overall and summing up, the present research suggests that commitment interventions are most effective if they are tailored according to three criteria: First, interventions should be tailored to the tenure of employees. This is because global commitment to the organization is the lever to the other commitments in low-tenured employees and deserves special attention at this stage, whereas commitments of more tenured employees are independent of each other. Second, interventions should be tailored to the intended outcomes. The reason for this tailoring is that global and specific commitments each have different consequences. Accordingly, interventions will be most efficient if they focus on the commitment that is most closely linked to a desired outcome. Third, interventions should be tailored to the overt goals of commitment targets. Because committed employees seem to work toward the perceived target goals, practitioners should ensure that the targets' goals are aligned with the intended consequences before strengthening commitment to this target. With these criteria in mind, practitioners should be more able to effectively create, maintain, and seize commitment for the benefits of employees and organizations.

3.3. General limitations and suggestions for future research

The present research has some limitations that should be considered and also offers interesting starting points for future research. First, there are limitations due to the chosen study designs. Whereas Study 3's multi-time cross-lagged panel design can serve as an indicator of causality, Studies 1 and 2 used cross-sectional designs for reasons of practicability. These designs do not allow empirical tests of the constructs' temporal order or causality. Accordingly, causal inferences on the associations between values and commitment as well as between commitment and change readiness rely on previous work. Both of these assumed associations rest on a broad theoretical foundation (Armenakis et al., 1993; Madsen et al., 2005; Maierhofer et al., 2002; Ostroff et al., 2005). It therefore appears most likely that the observed effects in the present research work in the assumed directions. Nevertheless, future research should continue to study commitment in cross-lagged panel designs or even employ experimental designs to test the directions of these effects.

Other limitations arise from the employed measures. In particular, all studies relied on self-report surveys. This arguably poses the threat of common method bias. However, commitment as a subjective construct is most adequately assessed by subjective measures (Klein et al., 2012). The alternative approach of inferring commitment from observable behavior, such as inferring commitment when employees stay with the organization for a long time, would again confound commitment with its outcomes. As it was a main objective of the present research to measure commitment without overlap with related constructs, the subjective measures were deemed most appropriate despite the associated risk of a common method bias. In response to this risk, diverse analyses in the three studies assessed the extent of potential common method bias. From these analyses, it appears that common method bias did not obscure the meaningful differences between the constructs and associations. Most importantly, the repeated finding of differences between associations indicates that the bias cannot account for the overall conclusions of the present research. What is more, recent simulation studies increasingly find that common method bias may not have the suspected severe impact on empirical associations (Lance et al., 2010). Nevertheless, future research could use multiple measurement occasions and include objective or multi-source measures for any observable antecedents and consequences of commitment to reduce the potential for common method bias and prevent the associated concerns.

With regard to commitment measurement, it is also important to note that the studies could not employ an existing measure but needed to adapt previously reported scales to the present purpose. Specifically, at the time of first data collection, there was a lack of parallel multi-target commitment scales and of scales that measure commitment without conceptual overlaps (cf., Klein et al., 2012). Consequently, the present research used an adapted commitment measure which is based on Meyer and Allen's (1991) renowned affective commitment scale (cf., Seggewiss, 2011). Within the studies in the present research, the resulting scale showed excellent reliability and internal validity. Moreover, the finding of correlations, descriptives, and associations that are comparable to previous research results (e.g., Becker & Billings, 1993; Bentein et al., 2002; Vandenberghe et al., 2004) indicate external validity. Future research could further investigate the scale and compare it to other emerging multi-target commitment measures (e.g., Klein, Cooper, Molloy, & Swanson, 2014). In fact, if such research further supported the reliability and validity of the present commitment scale, this scale may serve as a practical concise measure for application in future multi-target commitment research, particularly in German-speaking samples.

Because the present studies investigated novel research questions, they require replication in order to find out whether findings generalize across samples and contexts. Those results that can be compared to previous research (for example, descriptives and correlations) replicated previous findings in samples from other Western countries (e.g., United States: Becker & Billings, 1993; Greece: Vakola & Nikalou, 2005; Belgium: Vandenberghe et al., 2014). A study in Taiwan also found similar associations of supervisor and organizational commitment with outcomes such as job satisfaction,

performance, turnover intention, and organizational citizenship behavior as research with Western samples (Cheng et al., 2003). However, it differed from Western research in that supervisor commitment was higher than organizational commitment. Cheng et al. (2003) explain this difference with the higher collectivism and personalism in the Chinese culture that fosters a strong, but one-way loyalty from subordinates to the supervisors. Therefore, supervisor commitment in collectivist cultures could functionally differ from the more reciprocal supervisor commitment in individualistic societies which can be found in most Western countries (Hofstede, 1980). The present research itself indicates in a broader sense that commitment differs with the collectivism levels of cultures, because people- and team-oriented values had strong effects on all forms of commitment in Study 1. In the light of this literature, the present research's findings may generalize to other samples and cultures with similar individualism-collectivism values (Fischer & Mansell, 2009). Conversely, it would be interesting to see replications and cross-cultural research investigate the commitment associations from the present research in more collectivistic cultures.

Future research could also investigate other contextual factors that may impact the associations in this research. For example, Study 3 showed that associations within commitment changed with increasing employee tenure. And meta-analyses reported that commitment associations with an antecedent, Human Ressource practices, changed with employee age (Kooij, Jansen, Dikkers, & De Lange, 2010), as well as that commitment associations with an outcome, job performance, changed with employee tenure (Wright & Bonett, 2002). Following these findings, future studies could investigate whether the associations of commitment with values and change readiness also change with tenure or age. Other potential moderators that future research could control for include environmental factors such as the branch or size of an organization, situational factors that make commitment more or less salient and thus influence its associations (cf., Vandenberghe & Bentein, 2009), as well as individual factors such as different commitment propensities of employees before entry into an organization (Cohen, 2007).

Another direction for future research is to extend beyond the scope of the present research and investigate other commitments, or other antecedents and consequences.

In particular, the present research focused on the social targets within organizations in order to understand the roles that these groups and people play for commitment associations. Besides commitments to these social targets, employees also form unique commitments to non-social targets in the organizational context. Especially employees' commitment to their occupation has been reported to have important unique associations with the typical outcomes of commitment (Lee, Carswell, & Allen, 2000; Meyer et al., 1993). As commitment to a non-social target, occupational commitment's antecedents and consequences likely follow different principles than the principles of social cognitions and behavior that apparently underlie the associations of commitments to social targets. Finding support for this suggestion would indicate that commitments to social targets are notably different forms of commitment than commitments to non-social

targets. Occupational commitment could therefore be an interesting additional commitment to include in future research.

Regarding other antecedents and consequences, it should be noted that the present research focused on single antecedents and consequences of commitment. This focus followed the present research's aim to investigate the psychological processes underlying commitment associations. However, research interested in identifying the relative contribution of values to commitment, and of commitment to change readiness should investigate these constructs along with other antecedents and consequences of commitment to clarify not why, but how strongly they relate to commitment (researchers interested in conducting such studies can consult meta-analyses of commitment antecedents and consequences by Mathieu & Zajac, 1990; Meyer et al., 2002; Riketta & van Dick, 2005; Vandenberghe et al., 2004).

3.4. Conclusion

The present research shows that despite the extensive literature, much remains to be learned about employee commitment. The present research lightened the dark of employee commitment by examining more closely the processes that underlie three debated commitment associations which stand as examples of commitments' associations with antecedents, with consequences, and between commitments. Four refinements were applied to advance these debates. The two conceptual developments of distinguishing between commitments to different targets and of a confound-free conceptualization together with the third refinement of advanced analyses provided the intended deeper insights into these associations. They highlight that it is important to understand each of employees' multiple commitments as a unique bond with a target that entails two aspects: the bond and the target. Research so far predominantly focused on the bond and largely neglected the target, so that most work was devoted to specifying what the nature of the commitment bond is and what it is not, or to identifying the different motives that create this bond (Allen & Meyer, 1990; Cohen, 2007; Klein et al., 2012). Now the present studies strongly call for research to devote attention also to the target with whom the bond is formed. In particular, not only are commitment associations influenced by who the commitment target is, but also by what this commitment target values and communicates as their goals. Intriguingly, the present research shows that commitment can increase or decrease, and have positive impacts on employee behavior or none at all depending on the employee's perceptions of the commitment target. Consequently, the present findings recommend that considering who a commitment is formed with, and what these targets value, aim, and stand for in the eyes of employees may be a fine step forward to resolving the puzzle of inconsistent association findings in commitment research. These insights that were gained by applying conceptual and methodological refinements indicate that future research can further shed light onto commitment associations by following the path of the present research and reassessing debated commitment associations with these refinements.

As the fourth refinement, the present research connected the deeper insights into each debated association with theories from social psychology to explain the principles

that underlie commitment associations. From this connection emerges an understanding of employees' commitment as a social phenomenon whose antecedents, development, and consequences follow the principles of social processes. In particular, this research implies that principles such as uncertainty reduction and consistency motives (Berger, 1979; Rokeach, 1973) serve to strengthen commitment; role theory (Katz & Kahn, 1978) and cognitive subcategorization (Fiske, 1993) can explain how commitment develops over the employee lifecycle; and again consistency motives in the context of balance theory (Heider, 1958) account for when and why commitment influences employee reactions.

By proposing these theories and a common theme behind commitment and its associations as theoretical frameworks, the present research hopes to inspire a transition in commitment research from aiming to *identify* associations to a more explicatory perspective that much rather *explains* commitment associations and their conditions. Hopefully, the present research will thus contribute to an increasingly better understanding of commitment and to the future development of integrative frameworks that further embed multi-target commitment associations into the larger research on employee attitudes and behavior in organizations.

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APPENDIX

Erklärung über die Eigenständigkeit der erbrachten wissenschaftlichen Leistung

Ich erkläre hiermit, dass ich die vorliegende Arbeit ohne unzulässige Hilfe Dritter und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Die aus anderen Quellen direkt oder indirekt übernommenen Daten und Konzepte sind unter Angabe der Quelle gekennzeichnet.

Bei der Auswahl und Auswertung folgenden Materials haben mir die nachstehend aufgeführten Personen in der jeweils beschriebenen Weise entgeltlich/unentgeltlich geholfen.

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Weitere Personen waren an der inhaltlichen materiellen Erstellung der vorliegenden Arbeit nicht beteiligt.
Insbesondere habe ich hierfür nicht die entgeltliche Hilfe von Vermittlungs- bzw. Beratungsdiensten (Promotionsberater oder andere Personen) in Anspruch genommen. Niemand hat von mir unmittelbar oder mittelbar geldwerte Leistungen für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen.

Die Arbeit wurde bisher weder im In- noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt.

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(Ort. Datum) (Unterschrift)